

United States
Department of
Agriculture

Forest Service



Southeastern Forest
Experiment Station

Resource Bulletin
SE-92

Forest Statistics for the Southern Coastal Plain of South Carolina, 1987

John B. Tansey



April 1987

Southeastern Forest Experiment Station
P.O. Box 2680
Asheville, North Carolina 28802

**Forest Statistics for
the Southern Coastal Plain
of South Carolina, 1987**

John B. Tansey, Forester
Forest Inventory and Analysis
Asheville, North Carolina

Foreword

This report highlights the principal findings of the sixth forest survey in the Southern Coastal Plain of South Carolina. Fieldwork began in June 1986 and was completed in September 1986. Five previous surveys, completed in 1934, 1947, 1958, 1968, and 1978, provide statistics for measuring changes and trends over the past 53 years. The primary emphasis in this report is on the changes and trends since 1978. Previously reported figures have been adjusted to provide the best estimate of change.

Periodic surveys of the forest resource are authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. These surveys are a continuing, nationwide undertaking by the Regional Experiment Stations of the USDA Forest Service. In Florida, Georgia, North Carolina, South Carolina, and Virginia, these surveys are administered by the Forest Inventory and Analysis (Forest Survey) Research Unit at the Southeastern Forest Experiment Station, with headquarters in Asheville, NC. The primary objective of the survey is to periodically inventory and evaluate all forest and related resources. These multi-resource data help provide a basis for formulating forest policies and programs and for the orderly development and use

of the resources. This report deals only with the extent and condition of forest land, associated timber volumes, and rates of timber growth and removals.

The 12-county area covered by this report is one of three survey units in South Carolina. Comparable reports, USDA Forest Service Resource Bulletins SE-89 and SE-91, have been issued for the Piedmont and Northern Coastal Plain of South Carolina. Another report containing many of the State totals is being released with this report. An indepth, analytical State report on the timber resource should be available in late 1987.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the South Carolina Forestry Commission in collecting field data. Appreciation is also expressed for the excellent cooperation of other public agencies, forest industry, and other private landowners in providing information and access to the sample locations.



JOE P. McCLURE
Project Leader

Contents

	<u>Page</u>		<u>Page</u>
Since 1978 in the Southern Coastal Plain of South Carolina.....	1	13. Area of timberland, by stand-age and broad management classes, all ownerships.....	21
How the Inventory Is Made.....	3	14. Area of timberland, by stand-age and broad management classes, public ownerships.....	21
Reliability of the Data.....	3	15. Area of timberland, by stand-age and broad management classes, forest industry.....	22
Definitions of Terms.....	5	16. Area of timberland, by stand-age and broad management classes, other private ownerships.....	22
County Tables*		17. Area of timberland, by broad management and stand-volume classes	23
1. Area, by county and land class..	12	18. Volume of growing stock on tim- berland, by broad management class, species group, and stand-age class..	24
2. Area of timberland, by county and ownership class.....	13	19. Net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class.....	25
3. Area of timberland, by county and forest-type group.....	13	20. Annual removals of growing stock on timberland, by broad management class, species group, and stand-age class.....	26
4. Area of timberland, by county and stand-size class.....	14	21. Merchantable volume of live trees and growing stock on tim- berland, by forest-type and species groups.....	27
5. Area of timberland, by county and site class.....	14	22. Area of timberland treated or disturbed annually, by treatment or disturbance and ownership class.....	28
6. Area of timberland, by county and stocking classes of growing- stock trees.....	15	23. Area of timberland treated or disturbed annually and retained in commercial forest land, by treatment or disturbance and broad management class.....	28
7. Volume of growing stock and saw- timber on timberland, by county and species group.....	16	24. Area of timberland regenerated annually, by type of regeneration and broad management class.....	29
8. Net annual growth of growing stock and sawtimber on timberland, by county and species group.....	16		
9. Annual removals of growing stock and sawtimber on timberland, by county and species group.....	17		
Unit Tables*			
10. Area of timberland, by forest type and ownership class.....	18		
11. Area of timberland, by ownership and stocking classes of growing- stock trees.....	19		
12. Area of timberland, by forest type and stand-size class.....	20		

	<u>Page</u>
25. Area of timberland, by treatment opportunity and broad management classes.....	30
26. Area of timberland, by treatment opportunity and ownership classes...	30
27. Merchantable volume of live trees and growing stock on timberland, by ownership class and species group.....	31
28. Volume of sawtimber on timberland, by ownership class and species group.....	31
29. Net annual growth and removals of growing stock on timberland, by ownership class and species group...	32
30. Net annual growth and removals of sawtimber on timberland, by ownership class and species group...	32
31. Volume of timber on timberland, by class of timber and species group	33
32. Number of live trees on timberland, by species and diameter class	34
33. Number of growing-stock trees on timberland, by species and diameter class.....	35
34. Merchantable volume of live trees on timberland, by species and diameter class.....	36
35. Volume of growing stock on timberland, by species and diameter class.....	37
36. Volume of sawtimber on timberland, by species and diameter class	38

	<u>Page</u>
37. Volume of sawtimber on timberland, by species, size class, and log grade.....	39
38. Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class.....	40
39. Total volume of live trees on timberland, by species and diameter class.....	41
40. Green weight of forest biomass on timberland, by species and diameter class.....	42
41. Net annual growth and removals of live timber and growing stock on timberland, by species.....	43
42. Net annual growth and removals of sawtimber on timberland, by species.....	44
43. Annual removals of growing stock on timberland, by species and diameter class.....	45
44. Mortality of live timber, growing stock, and sawtimber on timberland, by species.....	46
45. Change in number of live trees on timberland, by species group, survey completion date, and diameter class.....	47
46. Land area, by land use class, major forest type, and survey completion date.....	48
47. Volume of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class	49

* Tables 1-12, 27, 29-33, 35-38, 41, 42, and 44 are common to all Forest Inventory and Analysis forest resource statistical reports of the Eastern United States.

Since 1978 in the Southern Coastal Plain
of South Carolina--

- area of timberland has declined by 61,000 acres. About 154,000 acres of timberland were diverted to other land uses. More than 53 percent of the diversions were for urban development. Most of the remaining diverted area went to agricultural uses. Some 86,000 acres of nonforest land reverted to timberland, partially offsetting the timberland losses to other uses. Timberland in this 12-county region totals 3.2 million acres, 61 percent of the total land area.

- area of timberland in nonindustrial private forest (NIPF) ownership declined by 6 percent to 2.3 million acres. Within the NIPF grouping, large shifts occurred among owner categories. Area of farmer-owned timberland dropped by 32 percent to about 850,000 acres, while area of timberland in the other individual category increased by 32 percent to 1.1 million acres. Other corporate timberland acreage changed little, remaining at just over 0.3 million acres. Area of timberland controlled by forest industry has increased by 66,000 acres, or by 12 percent. Nearly 20 percent of all timberland is now controlled by forest industry.

- area of timberland supporting softwood types increased slightly. Within the softwood type grouping, area of pine plantations increased in all owner groups; overall by 155,000 acres, or by 30 percent. The largest change was on forest industry land, where area of planted stands increased by 45 percent to 315,000 acres. Plantations account for one-half of all forest industry timberland. When all owners are grouped, pine plantations now make up 21 percent of all timberland, compared with 16 percent in 1978. Area of natural pine is down by 13 percent to 735,000 acres. Declines in area of natural pine occurred in all owner classes. For natural and planted stands combined, loblolly pine forest type increased by 36 percent, while area of all other softwood types declined. Area of hardwood types declined by 6 percent. Area

of hardwood type remained fairly constant on forest industry and public lands but declined on NIPF land.

- more than 73,000 acres have been harvested annually and retained in timberland. Of the area harvested, about 68 percent was in NIPF ownership and 27 percent was controlled by forest industry. About 57 percent of the annual harvest was from pine types; 18 percent of the harvested area was planted pine stands. Combining all types, an additional 34,000 acres of timberland experienced partial cutting or some intermediate silvicultural treatment each year.

- an average of 78,000 acres have been regenerated annually to adequate stocking levels, about 6 percent more than the area harvested. Total area regenerated exceeds harvest on all ownerships. Across all owners, planted stands account for about 45 percent of the acres regenerated. The rate of pine plantation establishment has more than doubled on both public and forest industry lands. On NIPF land, planting has increased fourfold and now totals almost 16,000 acres annually. In 1978, planting on NIPF lands accounted for 23 percent of the total acreage established in plantations; as of this survey, 42 percent of annual artificial regeneration occurred on NIPF land. Currently, about 8 of 10 acres regenerated on forest industry land and 3 of 10 acres regenerated on NIPF land are planted.

- average basal area of live trees 5.0 inches d.b.h. and larger remained about the same at 69 square feet per acre of timberland. Although area of poorly stocked stands declined by 26 percent, about one-fifth of all timberland is still poorly stocked. For all broad types combined, average net volume per acre of live timber has increased by just 1 percent to 1,605 cubic feet.

- number of hardwood trees declined in all diameter classes from the 2-inch through the 10-inch class. Declines were most severe in the sapling size classes, especially on NIPF land.

Since hardwoods were not remeasured in the interim survey, the large decrease in hardwood growth and increases in removals and mortality were not identified until now. Causes of the decline in growth deserve further study. Increased mortality, less ingrowth, slower survivor growth, and a reduction in the timberland base and numbers of trees are all contributing factors.

Since the last survey, unit boundaries changed slightly due to a transfer of land between counties. Changes in the timberland resource which occurred as a result of this exchange are reflected in the statistics reported here.

How the Inventory is Made

The method of the inventory is a sampling procedure designed to provide reliable statistics primarily at the State and Survey Unit levels. Individual county statistics are presented so that any combination of counties may be added together until a total is large enough to meet the desired degree of reliability. Procedures were as follows:

1. Initial estimates of forest and nonforest areas were based on the classification of 15,353 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 1,894 of the 16-point clusters was ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassifications.

2. Estimates of timber volume and forest classifications were based on measurements recorded at 1,154 ground sample locations systematically distributed on timberland. The plot design at each location was based on a cluster of 10 points. In most cases, variable plots, established by using a basal-area factor of 37.5 square feet per acre, were systematically spaced within a single forest condition at 5 of the 10 cluster points.

Trees less than 5 inches d.b.h. were tallied on a fixed-radius plot around each point center.

3. Equations prepared from detailed measurements collected on standing trees in this Unit, and similar measurements taken throughout the Southeast, were used to compute the volume of individual tally trees. A mirror caliper and sectional aluminum poles were used to obtain the additional measurements on these standing trees required to construct volume equations.

4. Felled trees were measured at 34 active cutting operations. These data will supplement the standing-tree volume data and be used to generate utilization factors for product and species groups. Forest biomass estimates were made from equations developed by the Utilization of Southern Timber Research Work Unit of the Southeastern Forest Experiment Station in Athens, GA.

5. Estimates of growth, removals, and mortality were determined from the remeasurement of 1,107 permanent sample plots established in the fourth survey.

6. Ownership information was collected from correspondence, public records, and local contacts. In those counties where the sample missed a particular ownership class, temporary sample plots were added.

7. All field data were sent to Asheville for editing and were entered into disk and magnetic-tape storage for processing. Final estimates were based on statistical summaries of the data.

Reliability of the Data

Statistical analysis of these data indicates the following sampling errors in terms of one standard error (two times out of three):

	<u>Percent</u>
Per million acres of	
timberland	1.11
Per billion cubic feet of	
growing stock.	6.31
Per billion cubic feet of	
net annual growth.	1.27
Per billion cubic feet of	
annual removals.	2.93

Sampling errors for county and unit totals,^a in terms of one standard error, Southern Coastal Plain of South Carolina, 1987

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
- - - - - <u>Sampling error</u> ^b - - - - -				
Aiken	1.30	8.89	7.31	21.38
Allendale	2.50	14.65	14.83	28.97
Bamberg	2.45	15.42	17.36	20.83
Barnwell	2.87	12.21	11.78	25.77
Beaufort	3.68	11.89	11.77	32.76
Calhoun	2.80	13.73	12.95	36.12
Colleton	1.59	6.18	6.53	17.48
Dorchester	1.90	8.42	9.95	23.05
Hampton	1.86	10.64	10.74	22.54
Jasper	2.51	9.95	9.63	27.95
Lexington	2.20	11.11	12.40	24.88
Orangeburg	1.77	7.69	8.10	23.11
Total	.61	2.92	2.93	7.16

^aSampling error of breakdowns of county and unit totals may be computed with the following formula:

$$E = \frac{(SE) \sqrt{(\text{Specified volume or area})}}{\sqrt{(\text{Volume or area total in question})}}$$

Where: E = Sampling error of the volume or area total in question

SE = Specified sampling error in table.

^bBy random-sampling formula (in percent).

Definitions of Terms

Allowable cut. The volume of timber that could be cut on timberland during a given period under specified management plans aimed at sustained production of timber products.

Basal area. The area in square feet of the cross section at breast height of a single tree or of all the trees in a stand, usually expressed as square feet of basal area per acre.

Biomass. The aboveground green weight of solid wood and bark in live trees 1.0 inch d.b.h. and larger from the ground to the tip of the tree. All foliage is excluded. The weight of wood and bark in lateral limbs, secondary limbs, and twigs under 0.5 inch in diameter at the point of occurrence on sapling-size trees is included but is excluded on poletimber and sawtimber-size trees.

Bole. That portion of a tree between a 1-foot stump and a 4-inch top diameter outside bark (d.o.b.) in trees 5.0 inches d.b.h. and larger.

Broad management class. A classification of timberland based on forest type and stand origin.

Pine plantation. Stands that have been artificially regenerated by planting or direct seeding and with a southern yellow pine, white pine-hemlock, or other softwood forest type.

Natural pine. Stands that have not been artificially regenerated and with a southern yellow pine, white pine-hemlock, or other softwood forest type.

Oak-pine. Stands with a forest type of oak-pine.

Upland hardwood. Stands with a forest type of oak-hickory, chestnut oak, southern scrub oak, or maple-beech-birch.

Lowland hardwood. Stands with a forest type of oak-gum-cypress, elm-ash-cottonwood, palm, or other tropical.

Bureau of Land Management lands. Federal lands administered by the Bureau of Land Management.

Census water. Streams, sloughs, estuaries, canals, and other moving bodies of water one-eighth of a statute mile in width and greater, and lakes, reservoirs, ponds, and other permanent bodies of water 40 acres in area and greater.

Commercial forest land. (see: Timberland).

Commercial species. Tree species conventionally regarded as being able to develop into trees suitable for the manufacture of industrial timber products. Species that typically exhibit small size, poor form, or inferior quality are excluded.

Cropland. Land under cultivation within the past 24 months, including orchards and land in soil-improving crops but excluding land cultivated in developing improved pasture. Also includes idle farmland.

D.b.h. Tree diameter (outside bark) at breast height (4.5 feet above the ground).

Diameter class. A classification of trees based on tree d.b.h. Two-inch diameter classes are commonly used by Forest Inventory and Analysis, with the even inch as the approximate midpoint for a class. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h.

Farm. Land on which agricultural operations are being conducted and sale of agricultural products totaled \$1,000 or more during the year.

Farm operator. A person who operates a farm, either doing the work himself or directly supervising the work.

Farmer-owned land (see: Other private land).

Forest industry land. Land owned by companies or individuals operating wood-using plants.

Forest industry leased land. Land leased or under management contracts to forest industry from other owners for periods of one forest rotation or longer. Land under cutting contracts is not included.

Forest land. Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use.

Forest type. A classification of forest land based on the species forming a plurality of live-tree stocking.

White pine-hemlock. Forests in which eastern white pine, red pine, or jack pine, singly or in combination, constitute a plurality of the stocking. (Common associates include hemlock, birch, and maple.)

Spruce-fir. Forests in which spruce or true firs, singly or in combination, constitute a plurality of the stocking. (Common associates include maple, birch, and hemlock.)

Longleaf-slash pine. Forests in which longleaf or slash pine, singly or in combination, constitute a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Loblolly-shortleaf pine. Forests in which loblolly pine, shortleaf pine, or other southern yellow pines, except longleaf or slash pine, singly or in combination, constitute a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Oak-pine. Forests in which hardwoods (usually upland oaks) constitute a plurality of the stocking but in which pines account for 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow-poplar.)

Oak-hickory. Forests in which upland oaks or hickory, singly or in combination, constitute a plurality of the stocking, except where pines account for 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include yellow-poplar, elm, maple, and black walnut.)

Oak-gum-cypress. Bottom-land forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, constitute a plurality of the stocking, except where pines account for 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include cottonwood, willow, ash, elm, hackberry, and maple.)

Elm-ash-cottonwood. Forests in which elm, ash, or cottonwood, singly or in combination, constitute a plurality of the stocking. (Common associates include willow, sycamore, beech, and maple.)

Maple-beech-birch. Forests in which maple, beech, or yellow birch, singly or in combination, constitute a plurality of the stocking. (Common associates include hemlock, elm, basswood, and white pine.)

Palm, other tropical. Forests in which palms and other tropicals constitute a plurality of the stocking.

Gross growth. Annual increase in merchantable volume of trees in the absence of cutting and mortality. (Gross growth includes survivor growth, ingrowth, growth on ingrowth, growth on removals prior to removal, and growth on mortality prior to death.)

Growing-stock trees. Live sawtimber-size trees of commercial species containing at least a 12-foot log, or two noncontiguous saw logs each 8 feet or longer, meeting minimum grade requirements (hardwoods must qualify as a log grade of either 3 or 4; softwoods must qualify as a log grade 3) with at least one-third of the gross board-foot volume (International 1/4-inch rule) between a 1-foot stump and the minimum saw-log top being sound, or a live tree below sawtimber size that will prospectively qualify under the above standards.

Desirable tree. A tree that qualifies as growing stock and has no serious defects in quality limiting present or prospective use; is of relatively high vigor (30 percent or more live crown ratio); is compatible with the site and

physiographic class; has a total board-foot loss not to exceed 15 percent in softwoods or 25 percent in hardwoods as a result of severe sweep, crook, or lean; and has a relatively clear bole.

Acceptable tree. A tree that qualifies as growing stock but does not meet the minimum requirements to qualify as a desirable tree. Included are sawtimber-size trees that do not contain a 12-foot saw log because of excessive, natural taper in the butt log but have the potential to produce a 12-foot saw log as diameter increases.

Growing-stock volume. Volume (cubic feet) of solid wood in growing-stock trees 5.0 inches d.b.h. and larger, from a 1-foot stump to a minimum 4.0-inch top diameter, outside bark, on the central stem. Volume of solid wood in primary forks from the point of occurrence to a minimum 4.0-inch top diameter outside bark is included.

Hardwoods. Angiosperms; dicotyledonous trees (including all palm species which are monocotyledonous), usually broadleaf and deciduous.

Soft hardwoods. Soft-textured hardwoods such as boxelder, red and silver maples, hackberry, loblolly-bay, sweetgum, yellow-poplar, magnolia, sweetbay, water tupelo, blackgum, sycamore, cottonwood, black cherry, willow, basswood, and elm.

Hard hardwoods. Hard-textured hardwoods such as sugar maple, birch, hickory, dogwood, persimmon (forest grown), black locust, beech, ash, honeylocust, holly, black walnut, mulberry, and all commercial oaks.

Idle farmland. Land including former cropland, orchard, improved pasture, and farm sites not tended within the past 2 years, and currently less than 16.7 percent stocked with live trees.

Improved pasture. Land currently improved for grazing by cultivation, seeding, irrigation, or clearing of trees or brush.

Indian land. All lands held in trust by the United States for individual Indians or tribes, or all lands, titles to which are held by individual Indians or tribes, subject to Federal restrictions against alienation.

Industrial wood. All roundwood products except fuelwood.

Ingrowth. The number or net volume of trees that grow large enough during a specified year to qualify as saplings, poletimber, or sawtimber.

Inhibiting vegetation. Cover sufficiently dense to prevent the establishment of tree seedlings.

Land area. The area of dry land and land temporarily or partly covered by water such as marshes, swamps, and river flood plains (omitting tidal flats below mean high tide), streams, sloughs, estuaries, and canals less than one-eighth of a statute mile in width, and lakes, reservoirs, and ponds less than 40 acres in area.

Live trees. All trees 1.0 inch d.b.h. and larger which are not dead at the time of inventory.

Live-tree volume. Volume (cubic feet) of wood above the ground line in live trees 1.0 inch d.b.h. and larger. The volume in twigs and lateral limbs smaller than 0.5 inch in diameter at the point of occurrence on sapling-size trees is included but is excluded on poletimber and sawtimber-size trees.

Log grade. A classification of logs based on external characteristics as indicators of quality or value.

Logging residues. The unused merchantable portion of growing-stock trees cut or destroyed during logging operations.

Logging slash. The unmerchantable portion of growing-stock trees (including saplings) plus all cull trees 1.0 inch d.b.h. and larger cut or destroyed during logging operations and not used.

Manageable stand. Timberland at least 60 percent stocked with growing-stock trees that can be featured together under a management scheme.

Merchantable portion. That portion of live trees 5.0 inches d.b.h. and larger between a 1-foot stump and a minimum 4.0-inch top diameter outside bark on the central stem. That portion of primary forks from the point of occurrence to a minimum 4.0-inch top diameter outside bark is included.

Merchantable volume. Solid-wood volume in merchantable portion of live trees.

Miscellaneous Federal land. Federal land other than national forests, land administered by the Bureau of Land Management, and land administered by the Bureau of Indian Affairs.

Miscellaneous private land. (see: Other private land).

Mortality. The merchantable volume in trees that have died from natural causes during a specified period.

National Forest land. Federal land that has been legally designated as national forests or purchase units, and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

Net annual growth. The net change in merchantable volume for a specific year in the absence of cutting (gross growth minus mortality for that specified year.)

Net volume. Gross volume of wood less deductions for rot, sweep, or other defect affecting use for timber products.

Noncommercial species. Tree species of typically small size, poor form, or inferior quality which normally do not develop into trees suitable for industrial wood products.

Nonforest land. Land that has never supported forests and land formerly forested where timber production is precluded by development for other uses.

Nonindustrial private forest (NIPF) land. (see: Other private land).

Nonstocked forest land. Timberland less than 16.7 percent stocked with growing-stock trees.

Other private land. Privately owned land excluding forest industry land or forest industry leased land. Also referred to as nonindustrial private forest (NIPF) land.

Farmer-owned land. Owned by farm operators, excluding incorporated farm ownerships.

Other individual land. Owned by individuals other than farm operators.

Other corporate land. Owned by corporations, including incorporated farm ownerships.

Other removals. The growing-stock volume of trees removed from the inventory by cultural operations such as timber stand improvement, land clearing, and other changes in land use that result in the removal of the trees from the timberland.

Plant residues. Wood material generated in the production of timber products at primary manufacturing plants.

Coarse residues. Material, such as slabs, edgings, trim, veneer cores and ends, which is suitable for chipping.

Fine residues. Material, such as sawdust, shavings, and veneer chippings, which is not suitable for chipping.

Plant byproducts. Residues (coarse or fine) utilized in the further manufacture of industrial products or for consumer use, or utilized as fuel.

Unused plant residues. Residues (coarse or fine) that are not used for any product, including fuel.

Poletimber-size trees. Live trees at least 5.0 inches d.b.h. but smaller than sawtimber size.

Productive-reserved forest land. (see: Reserved timberland).

Quality class. A classification of sawtimber volume by log or tree grades.

Rangeland. Land on which the natural vegetation is predominantly native grasses, grasslike plants, forbs, or shrubs valuable for forage, not qualifying as timberland and not developed for another land use. Rangeland includes natural grassland and savannah.

Reserved timberland. Forest land sufficiently productive to qualify as timberland, but withdrawn from timber utilization through statute or administrative designation.

Rotten trees. Live trees of commercial species that do not contain at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of rot or missing sections, and with less than one-third of the gross board-foot tree volume in sound material.

Rough trees. Live trees of commercial species that do not contain at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and live trees of non-commercial species.

Roundwood (roundwood logs). Logs, bolts, or other round sections cut from trees for industrial or consumer uses.

Roundwood chipped. Any timber cut primarily for pulpwood, delivered to non-pulpmills, chipped, and then sold to pulpmills as residues, including chipped tops, jump sections, whole trees, and pulpwood sticks.

Roundwood products. Any primary product such as lumber, poles, pilings, pulp, or fuelwood which is produced from roundwood.

Salvable dead trees. Standing or down dead trees considered utilizable by Forest Inventory and Analysis standards.

Saplings. Live trees 1.0 to 5.0 inches d.b.h.

Saw log. A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum diameter inside bark for softwoods of 6 inches (8 inches for hardwoods).

Saw-log portion. That part of the bole of sawtimber trees between a 1-foot stump and the saw-log top, including the portion of forks large enough to contain a saw log.

Saw-log top. The point on the bole of sawtimber trees above which a conventional saw log cannot be produced. The minimum saw-log top is 7.0 inches in diameter outside bark (d.o.b.) for softwoods and 9.0 inches (d.o.b.) for hardwoods.

Sawtimber-size trees. Softwoods 9.0 inches d.b.h. and larger and hardwoods 11.0 inches d.b.h. and larger.

Sawtimber volume. Growing-stock volume in the saw-log portion of sawtimber-size trees in board feet (International 1/4-inch rule).

Seedlings. Live trees of commercial species less than 1.0 inch d.b.h. that are expected to survive and develop.

Site class. A classification of forest land in terms of inherent capacity to grow crops of industrial wood based on fully stocked natural stands, by annual production capacity.

Class 1. 165 or more cubic feet per acre.

Class 2. 120 to 164 cubic feet per acre.

Class 3. 85 to 119 cubic feet per acre.

Class 4. 50 to 84 cubic feet per acre.

Class 5. 20 to 49 cubic feet per acre.

Softwoods. Gymnosperms; in the order Coniferales, usually evergreen (includes

the genus Taxodium which is deciduous), having needles or scalelike leaves.

Pines. Yellow pine species which include loblolly, longleaf, slash, pond, shortleaf, pitch, Virginia, sand, spruce, and Table Mountain pines.

Other softwoods. Cypress, eastern red-cedar, white cedar, eastern white pine, eastern hemlock, spruce, and fir.

Stand-size class. A classification of forest land based on the diameter class distribution of growing-stock trees in the stand.

Sawtimber stands. Stands at least 16.7 percent stocked with growing-stock trees, with half or more of total stocking in sawtimber and poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands. Stands at least 16.7 percent stocked with growing-stock trees of which half or more of total stocking is in poletimber and sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

Sapling-seedling stands. Stands at least 16.7 percent stocked with growing-stock trees of which more than half of total stocking is saplings and seedlings.

State, county, and municipal land. Land owned by States, counties, and local public agencies or municipalities, or land leased to these governmental units for 50 years or more.

Stocking. The degree of occupancy of land by trees, measured by basal area or the number of trees in a stand and spacing in the stand, compared with a minimum standard, depending on tree size, required to fully utilize the growth potential of the land.

Fully stocked. 100 percent or more stocking.

Medium stocked. 60 to 99 percent stocking.

Poorly stocked. Less than 60 percent stocking.

Survivor growth. The merchantable volume increment on trees 5.0 inches d.b.h. and larger in the inventory at the beginning of the year and surviving to its end.

Timberland. Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, not currently developed for nonforest use, capable of producing 20 cubic feet of industrial wood per acre per year and not withdrawn from timber utilization by legislative action.

Timber products. Roundwood products and byproducts.

Timber removals. The merchantable volume of trees removed from the inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use.

Top. The portion of the main stem and forks from a 4.0-inch diameter outside bark to the tips of the main stem and forks, plus all other limbs above the 4.0-inch top at least 0.5 inch in diameter at their point of occurrence.

Treatment opportunity. A classification of the management or treatment that would most improve for timber production the existing condition of the stand being sampled.

Tree grade. A classification of sawtimber trees based on the log grade of the butt log in the tree.

Unproductive forest land. (see: Woodland).

Upper-stem portion. That part of the main stem or fork of sawtimber trees above the saw-log top to minimum top diameter 4.0 inches outside bark or to the point where the main stem or fork breaks into limbs.

Urban and other areas. Areas developed for residential, industrial, or recreational purposes, school yards, cemeteries, roads, railroads, airports, beaches, powerlines and other rights-of-way, or other nonforest land not included in any other specified land use class.

Woodland. Forest land incapable of producing 20 cubic feet per acre per year of industrial wood under natural conditions, because of adverse site conditions.

Stocking Standard

D.b.h. class	Minimum number of trees per acre for full stocking	Minimum basal area per acre for full stocking
Seedlings	600	--
2	560	--
4	460	--
6	340	67
8	240	84
10	155	85
12	115	90
14	90	96
16	72	101
18	60	106
20	51	111

Conversion factors

Cubic feet of wood per average cord
(excluding bark)

D.b.h. class	All species	Pine	Other softwood	Hardwood
6	60.5	61.0	68.2	60.0
8	68.5	68.1	76.0	68.4
10	73.5	73.1	81.4	73.4
12	76.8	76.7	85.2	76.4
14	79.3	79.4	88.2	78.4
16	81.0	81.6	90.4	79.8
18	82.2	83.3	92.3	80.8
20	83.4	84.8	93.8	81.5
22	84.0	86.0	95.1	82.1
24+	85.3	87.7	98.0	83.1
Average	75.6	75.3	87.6	75.0

Metric equivalents of units used in this report

1 acre = 4,046.86 square meters or 0.404686 hectare
 1 cubic foot = 0.028317 cubic meter
 1 inch = 2.54 centimeters or 0.0254 meter
 Breast height = 1.4 meters above ground level
 1 square foot = 929.03 square centimeters or 0.0929 square meter
 1 square foot per acre basal area = 0.229568 square meter per hectare
 1 pound = 0.454 kilogram
 1 ton = 0.907 metric ton

County Tables

The county tables are intended for use in compiling forest resource estimates for groups of counties. Because the sampling procedure used by the Forest Survey was intended primarily to furnish inventory data for the survey unit as a whole, individual county estimates have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase can be computed with the formula on page 4.

Table 1.--Area, by county and land class, Southern Coastal Plain of South Carolina, 1987

County	All land ^a	Forest land			Nonforest land ^b	
		Total	Timberland	Woodland		Reserved timberland
<hr/>						
				<u>Acres</u>		
	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
Aiken	698,758	469,213	469,173	--	40	229,545
Allendale	264,474	158,635	158,635	--	--	105,839
Bamberg	253,043	143,463	143,463	--	--	109,580
Barnwell	356,883	230,084	230,074	--	10	126,799
Beaufort	370,304	140,891	140,291	--	600	229,413
Calhoun	243,437	133,304	133,304	--	--	110,133
Colleton	673,024	455,704	455,704	--	--	217,320
Dorchester	368,077	267,917	267,917	--	--	100,160
Hampton	359,162	258,770	258,770	--	--	100,392
Jasper	419,130	301,739	290,726	--	11,013	117,391
Lexington	452,480	246,892	246,892	--	--	205,588
Orangeburg	711,334	367,766	367,741	--	25	343,568
<hr/>						
Total	5,170,106	3,174,378	3,162,690	--	11,688	1,995,728

^aFrom U.S. Bureau of the Census, 1980.

^bIncludes 77,217 acres of water according to Forest Survey standards of area classification, but defined by the Bureau of Census as land.

Table 2.--Area of timberland, by county and ownership class, Southern Coastal Plain of South Carolina, 1987

County	All ownerships	Ownership class							
		National Forest	Miscellaneous Federal	State	County and municipal	Forest industry ^a	Other private		
							Farmer	Corporate	Individual
Aiken	469,173	6,021	62,696	2,108	1,084	64,146	111,039	55,520	166,559
Allendale	158,635	--	4,075	11	425	30,682	42,023	26,264	55,155
Bamberg	143,463	--	--	360	465	22,999	36,170	8,347	75,122
Barnwell	230,074	--	109,260	910	487	31,480	35,650	9,507	42,780
Beaufort	140,291	--	4,042	2,795	461	33,455	8,472	19,060	72,006
Calhoun	133,304	--	--	1,652	53	8,382	43,811	2,738	76,668
Colleton	455,704	--	--	2,180	1,674	133,891	117,565	18,703	181,691
Dorchester	267,917	--	--	1,678	340	88,528	99,771	33,257	44,343
Hampton	258,770	--	--	5,429	65	41,189	122,788	33,487	55,812
Jasper	290,726	--	--	2,270	129	115,211	41,787	71,634	59,695
Lexington	246,892	--	--	441	450	7,089	69,083	25,906	143,923
Orangeburg	367,741	--	2,061	5,070	665	44,379	119,798	29,219	166,549
Total	3,162,690	6,021	182,134	24,904	6,298	621,431	847,957	333,642	1,140,303

^aIncludes 8,729 acres of other private land under long-term lease.

Table 3.--Area of timberland, by county and forest-type group, Southern Coastal Plain of South Carolina, 1987

County	All type groups	Forest-type group									
		White pine- hemlock	Spruce- fir	Longleaf- slash	Loblolly- shortleaf	Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood	Maple-beech- birch	
Aiken	469,173	--	--	114,587	125,815	72,999	99,425	48,340	8,007	--	--
Allendale	158,635	--	--	10,505	68,173	23,462	7,881	38,109	10,505	--	--
Bamberg	143,463	--	--	10,438	39,348	10,439	19,475	60,981	2,782	--	--
Barnwell	230,074	--	--	34,333	93,816	12,782	49,767	39,376	--	--	--
Beaufort	140,291	--	--	18,509	45,610	12,707	8,472	54,993	--	--	--
Calhoun	133,304	--	--	24,614	50,309	10,953	30,173	14,517	2,738	--	--
Colleton	455,704	--	--	35,743	183,209	51,532	35,975	149,245	--	--	--
Dorchester	267,917	--	--	26,618	75,132	40,324	31,383	94,460	--	--	--
Hampton	258,770	--	--	31,349	72,830	15,460	27,069	112,062	--	--	--
Jasper	290,726	--	--	52,701	92,258	24,645	6,098	115,024	--	--	--
Lexington	246,892	--	--	40,745	47,383	46,057	92,558	14,391	5,758	--	--
Orangeburg	367,741	--	--	7,403	101,196	40,520	43,442	172,258	2,922	--	--
Total	3,162,690	--	--	407,545	995,079	361,880	451,718	913,756	32,712	--	--

Table 4.--Area of timberland, by county and stand-size class, Southern Coastal Plain of South Carolina, 1987

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling- seedling	
----- Acres -----					
Aiken	469,173	154,727	141,584	144,045	28,817
Allendale	158,635	74,361	18,208	63,439	2,627
Bamberg	143,463	46,276	34,096	57,527	5,564
Barnwell	230,074	106,665	35,856	87,553	--
Beaufort	140,291	90,908	26,640	20,625	2,118
Calhoun	133,304	55,588	44,804	30,121	2,791
Colleton	455,704	231,394	100,442	114,134	9,734
Dorchester	267,917	169,718	29,265	66,475	2,459
Hampton	258,770	138,107	36,651	78,710	5,302
Jasper	290,726	141,174	44,847	101,209	3,496
Lexington	246,892	100,746	52,254	50,267	43,625
Orangeburg	367,741	168,583	100,483	90,176	8,499
Total	3,162,690	1,478,247	665,130	904,281	115,032

Table 5.--Area of timberland, by county and site class, Southern Coastal Plain of South Carolina, 1987

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
----- Acres -----						
Aiken	469,173	--	5,048	56,613	245,023	162,489
Allendale	158,635	--	4,674	47,449	103,885	2,627
Bamberg	143,463	--	360	33,404	101,352	8,347
Barnwell	230,074	--	10,181	66,214	131,164	22,515
Beaufort	140,291	--	11,818	50,081	63,780	14,612
Calhoun	133,304	--	826	44,832	62,949	24,697
Colleton	455,704	5,343	35,500	164,362	232,273	18,226
Dorchester	267,917	--	15,693	132,356	97,699	22,169
Hampton	258,770	--	10,603	105,185	127,524	15,458
Jasper	290,726	--	18,291	81,446	181,652	9,337
Lexington	246,892	--	2,878	31,664	105,392	106,958
Orangeburg	367,741	--	5,844	94,969	246,474	20,454
Total	3,162,690	5,343	121,716	908,575	1,699,167	427,889

Table 6.--Area of timberland, by county and stocking class of growing-stock trees, Southern Coastal Plain of South Carolina, 1987

County	All classes	Stocking class (percent) ^a				
		>130	100-130	60-99	16.7-59	<16.7
<hr/>						
- - - - - <u>Acres</u> - - - - -						
Aiken	469,173	4,530	93,515	221,099	121,212	28,817
Allendale	158,635	5,253	46,032	80,144	24,579	2,627
Bamberg	143,463	7,656	42,459	71,091	16,693	5,564
Barnwell	230,074	10,182	59,568	114,512	45,812	--
Beaufort	140,291	5,463	50,613	48,423	33,674	2,118
Calhoun	133,304	9,040	45,659	56,645	19,169	2,791
Colleton	455,704	53,520	203,833	141,953	46,664	9,734
Dorchester	267,917	19,829	105,888	126,510	13,231	2,459
Hampton	258,770	21,209	81,333	122,201	28,725	5,302
Jasper	290,726	18,341	146,023	97,458	25,408	3,496
Lexington	246,892	5,757	32,993	80,597	83,920	43,625
Orangeburg	367,741	19,059	142,949	138,796	58,438	8,499
<hr/>						
Total	3,162,690	179,839	1,050,865	1,299,429	517,525	115,032

^a See stocking standards on page 11.

Table 7.--Volume of growing stock and sawtimber on timberland, by county and species group, Southern Coastal Plain of South Carolina, 1987

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet ^a					Thousand board feet				
Aiken	436,278	260,473	3,951	104,419	67,435	1,466,409	926,861	18,828	359,950	160,770
Allendale	216,866	101,562	9,106	56,748	49,450	847,022	411,323	47,919	198,987	188,793
Bamberg	152,380	53,964	20,961	48,130	29,325	491,475	199,710	85,693	127,175	78,897
Barnwell	287,576	142,304	14,780	88,542	41,950	996,311	578,823	52,507	238,493	126,488
Beaufort	234,654	111,539	1,909	74,472	46,734	951,792	531,806	5,018	240,368	174,600
Calhoun	212,207	116,710	2,697	64,876	27,924	739,618	455,269	12,087	189,295	82,967
Colleton	798,358	414,523	31,397	205,819	146,619	2,669,134	1,525,632	114,566	521,530	507,406
Dorchester	506,128	185,915	40,461	162,917	116,835	1,837,992	803,079	177,973	472,508	384,432
Hampton	471,501	141,755	32,846	170,630	126,270	1,800,492	606,558	141,478	556,227	496,229
Jasper	486,284	192,548	39,080	136,474	118,182	1,842,568	747,750	183,304	455,293	456,221
Lexington	241,605	156,106	969	38,145	46,385	879,459	655,471	1,471	102,457	120,060
Orangeburg	610,484	182,780	28,300	248,588	150,816	1,876,392	710,216	111,484	644,100	410,592
Total	4,654,321	2,060,179	226,457	1,399,760	967,925	16,398,664	8,152,498	952,328	4,106,383	3,187,455

^aFactors for converting to cords are shown on page 11.

Table 8.--Net annual growth of growing stock and sawtimber on timberland, by county and species group, Southern Coastal Plain of South Carolina, 1986

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Aiken	22,310	17,385	72	2,515	2,338	81,516	65,792	410	9,695	5,619
Allendale	8,842	5,964	120	1,349	1,409	39,052	27,309	693	4,614	6,436
Bamberg	6,324	3,589	332	1,273	1,130	27,570	19,115	1,710	3,617	3,128
Barnwell	12,202	8,271	275	2,359	1,297	52,109	35,752	1,493	9,607	5,257
Beaufort	7,943	5,029	76	1,595	1,243	39,462	26,306	204	6,841	6,111
Calhoun	8,873	6,474	53	1,465	881	42,362	30,041	312	8,498	3,511
Colleton	36,569	26,150	659	5,265	4,495	156,721	117,960	3,455	18,991	16,315
Dorchester	17,684	9,762	764	3,580	3,578	80,297	52,090	4,299	11,990	11,918
Hampton	15,184	7,646	593	3,704	3,241	76,615	42,472	3,397	15,385	15,361
Jasper	17,753	10,699	807	3,008	3,239	82,349	49,594	4,585	10,779	17,391
Lexington	11,357	8,733	17	1,323	1,284	49,745	39,566	202	5,440	4,537
Orangeburg	22,047	10,960	516	5,697	4,874	86,028	47,511	2,809	17,640	18,068
Total	187,088	120,662	4,284	33,133	29,009	813,826	553,508	23,569	123,097	113,652

Unit Tables

Table 10.--Area of timberland, by forest type and ownership class, Southern Coastal Plain of South Carolina, 1987

Forest type	All ownerships	Ownership class				
		National Forest	Other public	Forest industry	Forest industry- leased	Other private
----- Acres -----						
Softwood types						
White pine-hemlock	--	--	--	--	--	--
Spruce-fir	--	--	--	--	--	--
Longleaf pine	189,139	--	26,627	6,377	--	156,135
Slash pine	218,406	--	18,987	75,668	4,749	119,002
Loblolly pine	933,440	4,014	75,270	270,517	3,980	579,659
Shortleaf pine	13,456	--	--	--	--	13,456
Virginia pine	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--
Eastern redcedar	--	--	--	--	--	--
Pond pine	45,988	--	461	--	--	45,527
Spruce pine	2,195	--	--	2,195	--	--
Pitch pine	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--
Total	1,402,624	4,014	121,345	354,757	8,729	913,779
Hardwood types						
Oak-pine	361,880	--	27,597	34,488	--	299,795
Oak-hickory	329,308	--	20,094	41,642	--	267,572
Chestnut oak	--	--	--	--	--	--
Southern scrub oak	122,410	--	9,361	--	--	113,049
Oak-gum-cypress	913,756	--	31,953	178,801	--	703,002
Elm-ash-cottonwood	32,712	2,007	2,986	3,014	--	24,705
Maple-beech-birch	--	--	--	--	--	--
Total	1,760,066	2,007	91,991	257,945	--	1,408,123
All types	3,162,690	6,021	213,336	612,702	8,729	2,321,902

Table 11.--Area of timberland, by ownership and stocking classes of growing-stock trees, Southern Coastal Plain of South Carolina, 1987

Ownership class	All classes	Stocking class (percent) ^a				
		>130	100-130	60-99	16.7-59	<16.7
----- Acres -----						
National Forest	6,021	2,007	--	4,014	--	--
Other public	213,336	15,424	78,235	88,820	29,171	1,686
Forest industry	612,702	53,650	256,793	236,980	47,905	17,374
Forest industry-leased	8,729	862	5,134	1,364	1,369	--
Other private	2,321,902	107,896	710,703	968,251	439,080	95,972
All ownerships	3,162,690	179,839	1,050,865	1,299,429	517,525	115,032

^aSee stocking standards on page 11.

Table 12.--Area of timberland, by forest type and stand-size class, Southern Coastal Plain of South Carolina, 1987

Forest type	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling- seedling	
----- Acres -----					
Softwood types					
White pine-hemlock	--	--	--	--	--
Spruce-fir	--	--	--	--	--
Longleaf pine	189,139	98,845	49,674	40,620	--
Slash pine	218,406	114,327	84,477	19,602	--
Loblolly pine	933,440	348,764	181,441	394,298	8,937
Shortleaf pine	13,456	7,840	5,616	--	--
Virginia pine	--	--	--	--	--
Sand pine	--	--	--	--	--
Eastern redcedar	--	--	--	--	--
Pond pine	45,988	34,493	2,118	9,377	--
Spruce pine	2,195	2,195	--	--	--
Pitch pine	--	--	--	--	--
Table Mountain pine	--	--	--	--	--
Total	1,402,624	606,464	323,326	463,897	8,937
Hardwood types					
Oak-pine	361,880	169,452	61,969	125,094	5,365
Oak-hickory	329,308	100,355	89,195	125,970	13,788
Chestnut oak	--	--	--	--	--
Southern scrub oak	122,410	8,281	15,428	25,808	72,893
Oak-gum-cypress	913,756	563,862	172,333	163,512	14,049
Elm-ash-cottonwood	32,712	29,833	2,879	--	--
Maple-beech-birch	--	--	--	--	--
Total	1,760,066	871,783	341,804	440,384	106,095
All types	3,162,690	1,478,247	665,130	904,281	115,032

Table 13.--Area of timberland, by stand-age and broad management classes, all ownerships, Southern Coastal Plain of South Carolina, 1987

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
0-10	662,020	300,175	111,478	83,730	74,410	92,227
11-20	287,339	111,380	70,553	26,340	24,151	54,915
21-30	358,882	171,058	99,301	22,287	18,221	48,015
31-40	323,383	58,116	149,144	28,464	22,709	64,950
41-50	323,755	7,783	92,888	44,336	48,506	130,242
51-60	275,258	---	71,561	24,208	27,951	151,538
61-70	154,189	---	27,744	15,515	9,337	101,593
71-80	62,079	---	9,700	5,801	---	46,578
81+	106,377	---	10,985	2,118	10,536	82,738
No manageable stand	609,408	18,938	91,820	109,081	215,897	173,672
All classes	3,162,690	667,450	735,174	361,880	451,718	946,468

Table 14.--Area of timberland, by stand-age and broad management classes, public ownerships, Southern Coastal Plain of South Carolina, 1987

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
		----- Acres -----				
0-10	32,484	27,280	--	2,602	2,602	--
11-20	14,354	8,189	2,985	2,715	--	465
21-30	34,252	21,423	6,186	--	2,601	4,042
31-40	47,715	20,328	16,595	2,986	--	7,806
41-50	29,180	5,588	6,457	5,520	2,601	9,014
51-60	12,223	--	--	2,986	5,971	3,266
61-70	5,023	--	2,986	--	--	2,037
71-80	4,177	--	2,139	--	--	2,038
81+	7,594	--	--	--	2,601	4,993
No manageable stand	32,355	--	5,203	10,788	13,079	3,285
All classes	219,357	82,808	42,551	27,597	29,455	36,946

Table 15.--Area of timberland, by stand-age and broad management classes, forest industry,^a Southern Coastal Plain of South Carolina, 1987

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood

^aIncludes 8,729 acres of other private land under long-term lease.

Table 16.--Area of timberland, by stand-age and broad management classes, other private ownerships,^a Southern Coastal Plain of South Carolina, 1987

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<div>----- Acres -----</div>						
0-10	437,433	124,936	98,826	71,830	62,974	78,867
11-20	184,345	31,678	67,568	21,430	19,969	43,700
21-30	225,340	72,309	85,814	16,460	11,438	39,319
31-40	230,848	26,092	122,026	21,437	17,499	43,794
41-50	262,929	--	84,236	32,434	40,987	105,272
51-60	238,620	--	69,366	19,027	19,521	130,706
61-70	130,391	--	22,563	15,515	9,337	82,976
71-80	39,785	--	7,561	5,801	--	26,423
81+	71,668	--	10,985	2,118	5,476	53,089
No manageable stand	500,543	14,569	75,250	93,743	193,420	123,561
All classes	2,321,902	269,584	644,195	299,795	380,621	727,707

^aExcludes 8,729 acres of other private land under long-term lease to forest industry.

Table 17.--Area of timberland, by broad management and stand-volume classes, Southern Coastal Plain of South Carolina, 1987

Broad management class	All classes	Stand-volume class (cubic feet of growing stock per acre)				
		0-499	500-999	1000-1499	1500-1999	2000+
		----- Acres -----				
Pine plantation	667,450	355,650	88,486	43,516	62,825	116,973
Natural pine	735,174	141,356	98,042	112,763	143,886	239,127
Oak-pine	361,880	123,527	60,983	63,888	39,929	73,553
Upland hardwood	451,718	268,624	60,745	31,871	38,493	51,985
Lowland hardwood	946,468	172,843	98,671	87,691	92,727	494,536
All classes	3,162,690	1,062,000	406,927	339,729	377,860	976,174

Table 18.--Volume of growing stock on timberland, by broad management class, species group, and stand-age class, Southern Coastal Plain of South Carolina, 1987

Broad management class and species group	All classes	No manageable stand	Stand-age class (years)									
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+	
			----- Thousand cubic feet -----									

Pine plantation												
Softwood	594,284	3,808	15,874	125,735	306,356	122,885	19,626	--	--	--	--	--
Hardwood	9,818	294	385	495	7,105	1,163	376	--	--	--	--	--
Total	604,102	4,102	16,259	126,230	313,461	124,048	20,002	--	--	--	--	--

Natural pine												
Softwood	1,103,648	51,312	38,710	61,746	155,695	313,341	201,344	167,468	67,005	24,857	22,170	
Hardwood	108,355	5,251	5,012	3,228	15,619	27,754	18,583	21,876	7,679	2,998	355	
Total	1,212,003	56,563	43,722	64,974	171,314	341,095	219,927	189,344	74,684	27,855	22,525	

Oak-pine												
Softwood	238,329	48,281	20,246	13,383	20,250	29,468	45,729	31,755	18,260	9,239	1,718	
Hardwood	185,396	17,419	9,687	5,655	14,781	25,062	45,247	30,742	23,379	9,870	3,554	
Total	423,725	65,700	29,933	19,038	35,031	54,530	90,976	62,497	41,639	19,109	5,272	

Upland hardwood												
Softwood	60,499	19,225	1,620	2,033	1,184	3,406	10,277	16,748	969	--	5,037	
Hardwood	265,872	44,564	9,954	4,298	9,300	25,591	79,169	49,242	18,420	--	25,334	
Total	326,371	63,789	11,574	6,331	10,484	28,997	89,446	65,990	19,389	--	30,371	

Lowland hardwood												
Softwood	289,876	13,288	5,169	4,700	13,410	12,805	48,216	46,402	47,949	36,572	61,365	
Hardwood	1,798,244	98,798	37,584	33,333	55,828	146,446	286,753	429,498	296,493	139,084	274,427	
Total	2,088,120	112,086	42,753	38,033	69,238	159,251	334,969	475,900	344,442	175,656	335,792	

All types												
Softwood	2,286,636	135,914	81,619	207,597	496,895	481,905	325,192	262,373	134,183	70,668	90,290	
Hardwood	2,367,685	166,326	62,622	47,009	102,633	226,016	430,128	531,358	345,971	151,952	303,670	
Total	4,654,321	302,240	144,241	254,606	599,528	707,921	755,320	793,731	480,154	222,620	393,960	

Table 19.--Net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, Southern Coastal Plain of South Carolina, 1986

Broad management class ^a and species group	All classes	No manageable stand	Stand-age class ^a (years)									
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+	
			----- Thousand cubic feet -----									
Pine plantation												
Softwood	47,318	283	5,288	13,760	20,831	6,260	896	--	--	--	--	
Hardwood	861	11	3	193	621	20	13	--	--	--	--	
Total	48,179	294	5,291	13,953	21,452	6,280	909	--	--	--	--	
Natural pine												
Softwood	57,671	2,699	2,414	4,838	10,866	16,579	9,029	7,508	2,259	689	790	
Hardwood	4,306	151	166	163	806	1,260	691	695	323	36	15	
Total	61,977	2,850	2,580	5,001	11,672	17,839	9,720	8,203	2,582	725	805	
Oak-pine												
Softwood	10,771	2,258	1,296	658	1,069	1,274	2,042	1,233	568	302	71	
Hardwood	7,043	723	441	296	1,054	1,005	1,695	855	695	216	63	
Total	17,814	2,981	1,737	954	2,123	2,279	3,737	2,088	1,263	518	134	
Upland hardwood												
Softwood	2,433	922	71	83	31	144	399	612	33	--	138	
Hardwood	8,101	1,322	357	303	463	1,040	2,444	1,312	353	--	507	
Total	10,534	2,244	428	386	494	1,184	2,843	1,924	386	--	645	
Lowland hardwood												
Softwood	6,753	410	215	215	466	348	1,104	1,083	951	681	1,280	
Hardwood	41,831	2,833	1,271	1,531	1,969	4,293	7,498	9,962	5,272	2,973	4,229	
Total	48,584	3,243	1,486	1,746	2,435	4,641	8,602	11,045	6,223	3,654	5,509	
All types												
Softwood	124,946	6,572	9,284	19,554	33,263	24,605	13,470	10,436	3,811	1,672	2,279	
Hardwood	62,142	5,040	2,238	2,486	4,913	7,618	12,341	12,824	6,643	3,225	4,814	
Total	187,088	11,612	11,522	22,040	38,176	32,223	25,811	23,260	10,454	4,897	7,093	

^a Classifications at the end of the remeasurement period.

Table 20.--Annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, Southern Coastal Plain of South Carolina, 1986

Broad management class ^a and species group	All classes	No manageable stand	Stand-age class ^a (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
----- Thousand cubic feet -----											
Pine plantation											
Softwood	36,807	756	278	9,447	24,224	2,102	--	--	--	--	--
Hardwood	783	--	--	167	616	--	--	--	--	--	--
Total	37,590	756	278	9,614	24,840	2,102	--	--	--	--	--
Natural pine											
Softwood	67,772	2,882	321	2,842	23,248	15,992	11,668	2,595	5,172	3,052	--
Hardwood	4,705	650	--	--	1,553	1,576	524	228	174	--	--
Total	72,477	3,532	321	2,842	24,801	17,568	12,192	2,823	5,346	3,052	--
Oak-pine											
Softwood	13,247	3,808	967	557	1,845	97	774	2,458	2,741	--	--
Hardwood	4,088	120	--	--	1,218	--	830	498	1,422	--	--
Total	17,335	3,928	967	557	3,063	97	1,604	2,956	4,163	--	--
Upland hardwood											
Softwood	2,296	791	107	--	338	111	--	689	--	260	--
Hardwood	7,170	904	74	--	1,469	1,130	603	2,193	797	--	--
Total	9,466	1,695	181	--	1,807	1,241	603	2,882	797	260	--
Lowland hardwood											
Softwood	5,462	778	--	--	273	765	924	776	984	--	962
Hardwood	25,693	3,214	410	--	2,285	4,513	3,697	2,439	2,419	2,158	4,558
Total	31,155	3,992	410	--	2,558	5,278	4,621	3,215	3,403	2,158	5,520
All types											
Softwood	125,584	9,015	1,673	12,846	49,928	19,067	13,366	6,518	8,897	3,312	962
Hardwood	42,439	4,888	484	167	7,141	7,219	5,654	5,358	4,812	2,158	4,558
Total	168,023	13,903	2,157	13,013	57,069	26,286	19,020	11,876	13,709	5,470	5,520

^aClassifications before timber removals.

Table 22.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, Southern Coastal Plain of South Carolina, 1978 to 1987

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry- leased	Other private
----- Acres ^a -----					
Final harvest	73,332	3,360	19,573	251	50,148
Partial harvest ^b	10,981	--	1,010	--	9,971
Commercial thinning	12,554	1,006	1,447	515	9,586
Other stand improvement	3,657	--	595	--	3,062
Site preparation	43,661	3,681	20,681	86	19,213
Artificial regeneration ^c	37,378	3,345	18,195	86	15,752
Natural regeneration ^c	40,317	321	3,929	--	36,067
Other treatment	6,944	245	--	--	6,699
Natural disturbance	29,926	3,370	5,095	791	20,670

^aSince some acres experience more than one treatment or disturbance, there are no column totals.

^bIncludes high grading and some selective cutting.

^cIncludes establishment of trees for timber production on forest and nonforest land.

Table 23.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and broad management class, Southern Coastal Plain of South Carolina, 1978 to 1987

Treatment or disturbance	All classes	Broad management class ^a				
		Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
----- Acres ^b -----						
Final harvest	73,332	12,988	28,899	12,969	8,459	10,017
Partial harvest ^c	10,981	308	3,528	1,391	1,681	4,073
Commercial thinning	12,554	8,601	3,636	317	--	--
Other stand improvement	3,657	1,013	2,349	--	295	--
Site preparation	43,661	10,346	16,092	3,825	8,139	5,259
Other treatment	6,944	749	2,162	2,066	993	974
Natural disturbance	29,926	12,269	8,737	2,769	2,804	3,347

^aClassification before treatment or disturbance.

^bSince some acres experience more than one treatment or disturbance, there are no column totals.

^cIncludes high grading and some selective cutting.

Table 24.--Area of timberland regenerated annually, by type of regeneration and broad management class, Southern Coastal Plain of South Carolina, 1978 to 1987

Type of regeneration	All classes	Broad management class ^a				
		Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
		<u>Acres</u>				
Artificial regeneration following harvest	25,238	22,678	--	2,185	--	375
Natural regeneration following harvest	24,589	261	6,610	2,349	7,190	8,179
Other artificial regen- eration on forest land	8,772	8,324	--	448	--	--
Other natural regen- eration on forest land	9,826	--	4,428	2,767	969	1,662
Artificial regeneration on nonforest land	3,368	3,368	--	--	--	--
Natural reversion of nonforest land	5,902	--	3,620	958	976	348
Total	77,695	34,631	14,658	8,707	9,135	10,564

^aClassification after regeneration.

Table 25.--Area of timberland, by treatment opportunity and broad management classes, Southern Coastal Plain of South Carolina, 1987

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
Salvage	19,102	7,785	5,480	--	--	5,837
Harvest	163,677	--	32,732	2,118	16,995	111,832
Commercial thinning	99,308	54,825	32,566	--	3,721	8,196
Other stand improvement	209,126	11,650	51,264	43,766	32,896	69,550
Stand conversion	60,503	2,602	5,446	8,665	28,063	15,727
Regeneration	603,997	18,938	91,820	109,081	215,897	168,261
Stands in relatively good condition	1,926,901	571,650	515,866	192,849	154,146	492,390
Adverse sites ^a	80,076	--	--	5,401	--	74,675
All classes	3,162,690	667,450	735,174	361,880	451,718	946,468

^a Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 26.--Area of timberland, by treatment opportunity and ownership classes, Southern Coastal Plain of South Carolina, 1987

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry- leased	Other private
----- Acres -----					
Salvage	19,102	2,602	--	--	16,500
Harvest	163,677	8,055	42,354	--	113,268
Commercial thinning	99,308	2,602	46,814	--	49,892
Other stand improvement	209,126	14,831	25,365	--	168,930
Stand conversion	60,503	2,602	9,043	--	48,858
Regeneration	603,997	32,355	75,141	1,369	495,132
Stands in relatively good condition	1,926,901	153,044	401,536	7,360	1,364,961
Adverse sites ^a	80,076	3,266	12,449	--	64,361
All classes	3,162,690	219,357	612,702	8,729	2,321,902

^a Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 27.--Merchantable volume of live trees and growing stock on timberland, by ownership class and species group, Southern Coastal Plain of South Carolina, 1987

Ownership class	Live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood

Table 28.--Volume of sawtimber on timberland, by ownership class and species group, Southern Coastal Plain of South Carolina, 1987

Ownership class	Small sawtimber ^a					Large sawtimber ^b				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood

^aVolume of sawtimber trees less than 15.0 inches at d.b.h.

^bVolume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 29.--Net annual growth and removals of growing stock on timberland, by ownership class and species group, Southern Coastal Plain of South Carolina, 1986

Ownership class	Net annual growth					Annual timber removals				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	943	812	--	62	69	1,599	1,599	--	--	--
National Forest	13,861	10,061	240	2,270	1,290	6,331	5,759	--	106	466
Other public	43,345	30,389	1,180	6,465	5,311	52,271	37,541	2,167	7,379	5,184
Forest industry	--	--	--	--	--	191	191	--	--	--
Forest industry-leased	128,939	79,400	2,864	24,336	22,339	107,631	77,904	423	15,586	13,718
Other private										
All ownerships	187,088	120,662	4,284	33,133	29,009	168,023	122,994	2,590	23,071	19,368

Table 30.--Net annual growth and removals of sawtimber on timberland, by ownership class and species group, Southern Coastal Plain of South Carolina, 1986

Ownership class	Net annual growth					Annual timber removals				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	3,420	2,842	--	275	303	5,259	5,259	--	--	--
National Forest	66,725	50,261	1,292	9,576	5,596	24,142	23,287	--	--	855
Other public	173,334	122,553	6,556	21,309	22,916	181,431	134,087	9,329	18,074	19,941
Forest industry	--	--	--	--	--	376	376	--	--	--
Forest industry-leased	570,347	377,852	15,721	91,937	84,837	402,250	305,230	1,929	51,824	43,267
Other private										
All ownerships	813,826	553,508	23,569	123,097	113,652	613,458	468,239	11,258	69,898	64,063

Table 31.--Volume of timber on timberland, by class of timber and species group, Southern Coastal Plain of South Carolina, 1987

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
- - - - - <u>Thousand cubic feet</u> - - - - -					
Sawtimber trees					
Saw-log portion	3,009,594	1,476,232	181,135	782,035	570,192
Upper-stem portion ^a	393,025	133,491	19,615	151,027	88,892
Total	3,402,619	1,609,723	200,750	933,062	659,084
Poletimber trees	1,251,702	450,456	25,707	466,698	308,841
All growing-stock trees	4,654,321	2,060,179	226,457	1,399,760	967,925
Rough trees					
Sawtimber size	181,626	10,628	1,008	91,575	78,415
Poletimber size	176,169	7,448	1,644	81,944	85,133
Total	357,795	18,076	2,652	173,519	163,548
Rotten trees					
Sawtimber size	57,801	732	2,306	39,168	15,595
Poletimber size	5,626	257	136	3,334	1,899
Total	63,427	989	2,442	42,502	17,494
Salvable dead trees					
Sawtimber size	5,940	2,738	182	1,202	1,818
Poletimber size	4,060	1,952	67	919	1,122
Total	10,000	4,690	249	2,121	2,940
Total, all timber	5,085,543	2,083,934	231,800	1,617,902	1,151,907

^aIncludes cull sections in the saw-log portion.

Table 32.--Number of live trees on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)													29.0 and larger
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9			
----- Thousand trees -----															
Softwood															
Longleaf pine	55,922	20,573	13,742	6,398	4,237	3,663	3,228	2,434	1,180	331	90	46	--	--	--
Slash pine	59,736	12,513	14,318	13,040	9,100	5,357	2,952	1,456	641	203	115	41	--	--	--
Shortleaf pine	6,517	475	2,489	1,298	560	639	433	252	268	74	11	18	--	--	--
Loblolly pine	318,344	135,109	72,624	44,580	26,111	16,538	9,950	6,158	3,574	1,745	1,060	870	25	--	--
Pond pine	15,478	2,705	4,212	2,535	1,775	1,518	1,130	847	330	175	141	103	7	--	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	2,722	1,728	161	106	206	179	23	90	75	81	19	51	3	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	13,302	5,007	2,040	992	981	1,150	724	763	565	361	313	354	52	--	--
Pondcypress	16,589	7,783	2,798	1,474	1,773	1,118	622	606	167	142	70	28	8	--	--
Cedars	704	509	--	96	52	47	--	--	--	--	--	--	--	--	--
Total softwoods	489,314	186,402	112,384	70,519	44,795	30,209	19,062	12,606	6,800	3,112	1,819	1,511	95	--	--
Hardwood															
Select white oaks	16,741	8,491	2,995	1,860	1,367	505	461	398	267	193	63	137	4	--	--
Select red oaks	6,151	2,199	2,080	752	272	320	103	152	102	80	41	26	24	--	--
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	28,980	16,039	6,470	2,096	1,117	1,136	562	392	255	287	218	339	69	--	--
Other red oaks	284,267	188,427	43,980	19,981	13,141	7,215	4,220	2,504	1,652	1,273	755	922	197	--	--
Hickory	39,889	25,978	6,148	3,398	1,683	930	752	354	262	170	55	132	27	--	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	343	317	--	--	--	--	26	--	--	--	--	--	--	--	--
Soft maple	169,538	115,779	30,393	10,877	5,404	2,480	1,829	1,074	742	452	251	243	14	--	--
Beech	1,117	1,014	--	--	51	--	28	17	--	--	--	7	--	--	--
Sweetgum	236,863	153,027	39,660	18,670	10,724	5,514	4,078	2,242	1,547	699	369	315	18	--	--
Tupelo and blackgum	176,974	98,866	28,021	16,278	9,717	7,830	6,924	4,164	2,400	1,343	739	580	112	--	--
Ash	55,860	39,916	9,312	2,395	1,074	1,289	889	447	238	149	49	96	6	--	--
Cottonwood	1,935	553	717	159	190	235	66	--	--	--	9	6	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	19,004	8,512	4,462	1,862	1,208	1,069	599	435	291	182	217	164	3	--	--
Bay and magnolia	29,761	27,801	650	742	168	176	72	59	26	26	9	23	9	--	--
Black cherry	29,781	21,067	5,559	2,249	850	36	--	20	--	--	--	--	--	--	--
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sycamore	777	313	--	245	63	--	--	20	32	27	51	26	--	--	--
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	20,047	11,900	3,884	1,780	846	742	198	258	135	134	116	50	4	--	--
Other eastern hardwoods	340,794	260,863	56,366	15,597	4,679	1,776	882	273	166	95	55	35	7	--	--
Total hardwoods	1,458,822	981,062	240,697	98,941	52,554	31,253	21,689	12,809	8,115	5,110	2,997	3,101	494	--	--
All species	1,948,136	1,167,464	353,081	169,460	97,349	61,462	40,751	25,415	14,915	8,222	4,816	4,612	589	--	--

Table 33.--Number of growing-stock trees on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)														29.0 and larger
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9				
----- Thousand trees -----																
Softwood																
Longleaf pine	52,490	18,653	12,612	6,164	4,126	3,626	3,228	2,434	1,180	331	90	46	--	--	--	--
Slash pine	57,991	11,718	13,990	12,705	8,913	5,326	2,902	1,437	641	203	115	41	--	--	--	--
Shortleaf pine	6,251	475	2,333	1,188	560	639	433	252	268	74	11	18	--	--	--	--
Loblolly pine	301,111	122,346	69,755	43,473	25,929	16,361	9,870	6,158	3,559	1,721	1,050	864	25	--	--	--
Pond pine	14,691	2,554	4,027	2,312	1,720	1,393	1,130	828	312	175	130	103	7	--	--	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	2,280	1,389	161	106	127	179	23	90	75	67	9	51	3	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	12,394	4,520	1,884	992	810	1,150	724	730	534	339	313	354	44	--	--	--
Pondcypress	15,459	7,304	2,637	1,188	1,636	1,069	622	588	167	142	70	28	8	--	--	--
Cedars	704	509	--	36	52	47	--	--	--	--	--	--	--	--	--	--
Total softwoods	463,371	169,468	107,399	68,224	43,873	29,790	18,932	12,517	6,736	3,052	1,788	1,505	87	--	--	--
Hardwood																
Select white oaks	12,369	5,325	2,142	1,668	1,310	505	406	377	267	181	63	121	4	--	--	--
Select red oaks	5,258	1,517	2,080	619	197	320	103	152	102	80	41	26	21	--	--	--
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	11,622	5,144	2,578	1,411	655	802	285	165	134	123	127	180	18	--	--	--
Other red oaks	203,811	121,066	35,414	18,272	12,006	6,629	3,875	2,286	1,469	1,127	688	815	164	--	--	--
Hickory	25,745	14,440	4,393	2,928	1,527	852	674	335	247	170	37	126	16	--	--	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Soft maple	82,617	45,387	19,957	7,980	4,086	1,931	1,270	808	582	339	140	137	--	--	--	--
Beech	524	507	--	--	--	--	--	17	--	--	--	--	--	--	--	--
Sweetgum	176,600	104,525	31,870	16,328	9,929	5,128	3,844	2,182	1,517	618	352	293	14	--	--	--
Tupelo and blackgum	94,460	37,741	17,700	12,278	7,357	6,174	5,576	3,418	2,064	1,111	579	390	72	--	--	--
Ash	21,809	13,705	2,931	1,805	703	1,002	808	382	222	138	39	74	--	--	--	--
Cottonwood	730	--	156	159	190	144	66	--	--	--	9	6	--	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	16,319	6,664	3,944	1,862	1,006	1,069	552	435	274	182	187	144	--	--	--	--
Bay and magnolia	4,285	3,254	312	335	168	82	45	43	26	12	--	8	--	--	--	--
Black cherry	12,625	8,131	2,608	1,485	365	36	--	--	--	--	--	--	--	--	--	--
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sycamore	404	157	--	100	--	--	--	--	20	32	27	42	26	--	--	--
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	10,511	4,215	2,880	1,485	589	626	178	220	118	83	95	22	--	--	--	--
Other eastern hardwoods	12,743	7,603	2,622	785	684	389	257	179	121	48	27	28	--	--	--	--
Total hardwoods	692,432	379,381	131,587	69,500	40,772	25,689	17,939	11,019	7,175	4,239	2,426	2,396	309	--	--	--
All species	1,155,803	548,849	238,986	137,724	84,645	55,479	36,871	23,536	13,911	7,291	4,214	3,901	396	--	--	--

Table 34.--Merchantable volume of live trees on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)											21.0-29.0 and larger
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9			
----- Thousand cubic feet -----													
Softwood													
Longleaf pine	287,208	18,543	29,156	45,192	61,402	64,790	43,318	15,306	5,658	3,843			
Slash pine	327,230	37,368	64,767	69,003	59,855	43,427	28,314	12,035	8,355	4,106			
Shortleaf pine	54,553	4,624	4,241	9,708	10,554	7,602	11,456	3,966	767	1,635			
Loblolly pine	1,270,107	111,137	167,670	203,768	195,633	183,451	146,055	94,255	74,912	88,792	4,434		
Pond pine	118,767	7,392	11,783	17,710	20,890	23,318	11,174	8,785	8,296	8,421	998		
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	
Spruce pine	21,379	284	1,196	2,235	585	2,502	2,876	4,556	1,258	5,248	639		
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	
Baldcypress	156,145	3,424	7,058	14,806	14,011	20,415	19,869	16,849	17,910	32,928	8,875		
Pondcypress	74,437	5,523	10,936	13,078	10,477	13,902	5,706	6,074	3,680	2,238	2,823		
Cedars	969	243	303	423	--	--	--	--	--	--	--	--	
Total softwoods	2,310,795	188,538	297,110	375,923	373,407	359,407	268,768	161,826	120,836	147,211	17,769		
Hardwood													
Select white oaks	75,213	5,034	9,747	5,559	8,668	10,397	9,963	9,096	4,082	12,032	635		
Select red oaks	33,875	2,435	1,491	4,000	2,329	3,998	4,033	4,464	2,686	2,814	5,625		
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--	--	
Other white oaks	99,775	4,437	5,247	10,617	7,940	7,517	7,351	10,339	10,021	26,414	9,892		
Other red oaks	670,665	59,023	83,371	84,954	77,196	66,663	60,846	63,166	47,482	88,115	39,849		
Hickory	91,056	7,762	10,137	9,026	13,524	9,507	10,338	8,627	2,967	13,133	6,035		
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	
Hard maple	637	--	--	--	637	--	--	--	--	--	--	--	
Soft maple	235,264	31,917	33,533	31,007	32,071	26,671	26,290	22,166	13,267	17,677	665		
Beech	1,599	--	499	--	501	483	--	--	--	116	--	--	
Sweetgum	504,786	49,925	69,138	68,751	82,423	70,062	64,660	37,752	25,720	32,441	3,914		
Tupelo and blackgum	651,026	47,325	59,241	86,532	121,845	104,847	78,805	58,455	39,550	41,880	12,546		
Ash	96,411	6,700	6,982	17,217	19,077	14,587	9,550	7,450	3,475	10,213	1,160		
Cottonwood	6,412	307	1,263	2,121	1,128	--	--	--	786	807	--	--	
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	
Yellow-poplar	104,922	7,069	7,872	13,657	11,494	13,109	11,711	10,276	13,413	15,958	363		
Bay and magnolia	12,035	1,856	1,168	1,375	1,391	1,449	998	980	515	1,621	682		
Black cherry	11,467	5,974	4,951	384	--	158	--	--	--	--	--	--	
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	
Sycamore	10,902	773	495	--	--	635	1,393	1,502	3,176	2,928	--	--	
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	
Elm	53,986	3,796	5,281	--	--	6,866	5,852	5,751	8,389	3,656	528		
Other eastern hardwoods	104,717	29,746	22,323	16,044	12,453	6,381	6,576	3,539	2,634	4,118	903		
Total hardwoods	2,764,748	264,079	322,739	361,031	396,757	343,330	298,366	243,563	178,163	273,923	82,797		
All species	5,075,543	452,617	619,849	736,954	770,164	702,737	567,134	405,389	298,999	421,134	100,566		

Table 35.--Volume of growing stock on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)											29.0 and larger
		5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9			
----- Thousand cubic feet -----													
Softwood													
Longleaf pine	285,853	18,173	28,583	44,780	61,402	64,790	43,318	15,306	5,658	3,843	--	--	
Slash pine	323,955	36,611	63,828	68,472	59,106	43,128	28,314	12,035	8,355	4,106	--	--	
Shortleaf pine	54,328	4,399	4,241	9,708	10,554	7,602	11,456	3,966	767	1,635	--	--	
Loblolly pine	1,260,593	108,442	166,756	202,173	194,237	183,451	145,489	93,089	74,272	88,250	4,434	--	
Pond pine	115,802	6,802	11,548	16,985	20,890	22,635	10,861	8,785	7,877	8,421	998	--	
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	
Spruce pine	19,648	284	789	2,235	585	2,502	2,876	3,794	696	5,248	639	--	
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	
Baldcypress	152,945	3,424	6,488	14,806	14,011	20,014	19,234	16,309	17,910	32,928	7,821	--	
Pondcypress	72,543	5,065	10,184	12,705	10,477	13,591	5,706	6,074	3,680	2,238	2,823	--	
Cedars	969	243	303	423	--	--	--	--	--	--	--	--	
Total softwoods													
2,286,636 183,443 292,720 372,287 371,262 357,713 267,254 159,358 119,215 146,669 16,715													
Hardwood													
Select white oaks	71,696	4,516	9,526	5,559	7,816	10,028	9,963	8,481	4,082	11,090	635	--	
Select red oaks	32,979	2,244	1,164	4,000	2,329	3,998	4,033	4,464	2,686	2,814	5,247	--	
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--	--	
Other white oaks	58,078	2,989	3,559	7,628	4,644	3,545	4,438	5,461	6,577	15,523	3,714	--	
Other red oaks	623,628	54,861	77,512	79,854	72,329	62,553	56,399	58,139	45,392	81,099	35,490	--	
Hickory	83,982	6,833	9,040	8,542	12,453	9,082	9,639	8,627	2,588	12,722	4,456	--	
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	
Hard maple	--	--	--	--	--	--	--	--	--	--	--	--	
Soft maple	183,194	23,838	26,857	25,036	25,407	21,671	22,065	17,677	8,629	12,014	--	--	
Beech	483	--	--	--	--	483	--	--	--	--	--	--	
Sweetgum	480,697	44,786	65,381	65,493	79,542	68,035	63,824	34,231	25,202	30,684	3,519	--	
Tupelo and blackgum	542,085	36,936	46,596	70,145	102,947	90,131	70,315	51,871	32,693	30,930	9,521	--	
Ash	83,692	5,223	4,976	14,200	17,850	12,988	9,436	7,362	2,848	8,809	--	--	
Cottonwood	5,800	307	1,263	1,509	1,128	--	--	--	786	807	--	--	
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	
Yellow-poplar	99,754	7,069	6,837	13,657	10,629	13,109	11,159	10,276	12,392	14,626	--	--	
Bay and magnolia	6,961	882	1,168	873	864	1,073	998	510	--	593	--	--	
Black cherry	6,568	3,827	2,357	384	--	--	--	--	--	--	--	--	
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	
Sycamore	9,437	396	--	--	--	635	1,393	1,502	2,583	2,928	--	--	
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	
Elm	44,663	3,408	3,657	8,781	3,720	6,185	5,244	4,276	7,069	2,323	--	--	
Other eastern hardwoods	33,988	2,289	4,822	4,759	4,240	4,857	4,968	2,587	1,890	3,576	--	--	
Total hardwoods													
2,367,685 200,404 264,715 310,420 345,898 308,373 273,874 215,464 155,417 230,538 62,582													
All species													
4,654,321 383,847 557,435 682,707 717,160 666,086 541,128 374,822 274,632 377,207 79,297													

Table 36.--Volume of sawtimber on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)										21.0- 28.9	29.0 and larger
		9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9						
Thousand board feet													
Softwood													
Longleaf pine	1,230,657	182,765	297,186	346,569	249,610	93,001	36,091	25,435	--				
Slash pine	1,066,792	253,718	270,553	225,691	161,956	73,165	53,531	28,178	--				
Shortleaf pine	227,977	37,445	48,744	38,970	63,799	23,759	4,726	10,534	--				
Loblolly pine	5,023,150	725,968	873,354	947,221	817,703	559,825	471,271	595,285	32,523				
Pond pine	499,860	64,089	95,928	116,954	60,620	52,180	48,825	54,304	6,960				
Virginia pine	--	--	--	--	--	--	--	--	--				
Pitch pine	--	--	--	--	--	--	--	--	--				
Table Mountain pine	--	--	--	--	--	--	--	--	--				
Spruce pine	104,062	9,047	2,874	13,012	15,641	22,063	4,177	32,926	4,322				
Sand pine	--	--	--	--	--	--	--	--	--				
Eastern white pine	--	--	--	--	--	--	--	--	--				
Eastern hemlock	--	--	--	--	--	--	--	--	--				
Spruce and fir	--	--	--	--	--	--	--	--	--				
Baldcypress	698,946	45,299	53,292	86,980	91,848	83,381	96,425	191,945	49,776				
Pondcypress	251,911	41,099	39,890	59,822	27,673	31,281	20,067	13,032	19,047				
Cedars	1,471	1,471	--	--	--	--	--	--	--				
Total softwoods	9,104,826	1,360,901	1,681,821	1,835,219	1,488,850	938,655	735,113	951,639	112,628				
Hardwood													
Select white oaks	241,278	--	26,577	40,390	45,171	40,648	21,427	63,308	3,757				
Select red oaks	135,506	--	8,299	16,053	18,697	23,166	14,499	17,726	37,066				
Chestnut oak	--	--	--	--	--	--	--	--	--				
Other white oaks	215,480	--	17,034	14,514	20,492	26,007	32,560	83,318	21,555				
Other red oaks	2,041,469	--	273,174	271,049	268,151	294,755	242,418	466,369	225,553				
Hickory	279,060	--	43,219	37,357	43,364	42,054	13,419	71,481	28,166				
Yellow birch	--	--	--	--	--	--	--	--	--				
Hard maple	--	--	--	--	--	--	--	--	--				
Soft maple	440,884	--	83,070	82,334	93,002	80,072	41,368	61,038	--				
Beech	1,853	--	--	1,853	--	--	--	--	--				
Sweetgum	1,412,210	--	286,222	290,081	307,600	178,845	140,364	185,081	24,017				
Tupelo and blackgum	1,614,562	--	326,240	343,773	304,208	244,580	164,943	171,287	59,531				
Ash	246,487	--	57,523	51,068	40,641	34,602	14,270	48,383	--				
Cottonwood	12,611	--	3,672	--	--	--	4,181	4,758	--				
Basswood	--	--	--	--	--	--	--	--	--				
Yellow-poplar	367,939	--	37,089	58,163	54,926	55,255	70,933	91,573	--				
Bay and magnolia	16,792	--	3,052	4,049	4,386	2,477	--	2,828	--				
Black cherry	--	--	--	--	--	--	--	--	--				
Black walnut	--	--	--	--	--	--	--	--	--				
Sycamore	44,197	--	--	2,419	5,955	6,964	12,673	16,186	--				
Black locust	--	--	--	--	--	--	--	--	--				
Elm	124,698	--	12,983	23,937	22,599	19,469	33,912	11,798	--				
Other eastern hardwoods	98,812	--	14,880	19,550	21,851	12,466	9,533	20,532	--				
Total hardwoods	7,293,838	--	1,193,034	1,256,590	1,251,043	1,061,360	816,500	1,315,666	399,645				
All species	16,398,664	1,360,901	2,874,855	3,091,809	2,739,893	2,000,015	1,551,613	2,267,305	512,273				

Table 37.--Volume of sawtimber on timberland, by species, size class, and tree grade, Southern Coastal Plain of South Carolina, 1987

Species	All size classes				Trees 15.0 inches d.b.h. and larger			
	Tree grade				All grades			
	1	2	3	4	1	2	3	4
Softwood								
Yellow pinesa	8,152,498	1,513,864	1,387,750	5,250,884	--	3,602,410	1,058,411	754,761
Eastern white pineb	--	--	--	--	--	--	--	--
Spruce and firb	--	--	--	--	--	--	--	--
Cypressc	950,857	375,520	237,653	312,507	25,177	624,475	375,520	149,920
Other eastern softwoods ^b	1,471	--	--	1,471	--	--	--	--
Total	9,104,826	1,889,384	1,625,403	5,564,862	25,177	4,226,885	1,433,931	904,681
Hardwood ^c								
Select white and red oaks	376,784	114,318	129,160	115,812	17,494	285,465	114,318	108,366
Other white and red oaks	2,256,949	622,210	555,221	842,619	236,899	1,681,178	622,210	466,314
Hickory	279,060	68,544	69,861	105,238	35,417	198,484	68,544	58,079
Yellow birch	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--
Sweetgum	1,412,210	397,793	434,095	536,459	43,863	835,907	397,793	271,162
Ash, walnut, and black cherry	246,487	40,794	94,836	104,464	6,393	137,896	40,794	55,021
Yellow-poplar	367,939	117,536	98,211	117,412	34,780	272,687	117,536	59,354
Other eastern hardwoods	2,354,409	470,593	728,713	1,012,639	142,464	1,432,597	470,593	505,003
Total	7,293,838	1,831,788	2,110,097	2,834,643	517,310	4,844,214	1,831,788	1,523,299
All species	16,398,664	3,721,172	3,735,500	8,399,505	542,487	9,071,099	3,265,719	2,427,980

^aFor yellow pines, tree grade is based on "Southern Pine Tree Grades for Yard and Structural Lumber," Research Paper SE-40, published by the Southeastern Forest Experiment Station, Asheville, NC, 1968. Tree grade 4 does not apply to yellow pine.

^bFor other softwoods (excluding cypress), tree grade is based on "Tree Grades for Eastern White Pine," Research Paper NE-214, published by the Northeastern Forest Experiment Station, Broomall, PA, 1971.

^cFor hardwoods and cypress, tree grades 1, 2, and 3 are based on "Hardwood Tree Grades for Factory Lumber," Research Paper NE-333, published by the Northeastern Forest Experiment Station, Broomall, PA, 1976. Grade 4 trees are sawtimber trees not qualifying as tree Grades 1, 2, or 3. The butt log of these trees qualify as construction (tie and timber) logs based on "A Guide to Hardwood Log Grading (revised)," General Technical Report NE-1, published by the Northeastern Forest Experiment Station, Broomall, PA, 1971.

Table 38.--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)										21.0-28.9	29.0 and larger
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger				
----- Thousand cubic feet -----													
Softwood													
Longleaf pine	221,470	37,131	56,319	61,618	42,010	14,998	5,589	3,805	--	--	--	--	--
Slash pine	200,723	54,575	53,449	40,972	27,540	11,851	8,270	4,066	--	--	--	--	--
Shortleaf pine	42,351	8,005	9,663	7,234	11,154	3,917	760	1,618	--	--	--	--	--
Loblolly pine	902,962	157,339	174,265	173,604	140,945	91,520	73,531	87,368	4,390	--	--	--	--
Pond pine	91,016	13,844	19,134	21,646	10,592	8,676	7,799	8,338	987	--	--	--	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	17,710	1,775	542	2,377	2,775	3,727	689	5,193	632	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	129,655	10,715	11,824	17,922	17,741	15,297	16,981	31,598	7,577	--	--	--	--
Pondcypress	51,167	10,022	9,084	12,450	5,361	5,778	3,536	2,170	2,766	--	--	--	--
Cedars	313	313	--	--	--	--	--	--	--	--	--	--	--
Total softwoods	1,657,367	293,719	334,280	337,823	258,118	155,764	117,155	144,156	16,352	--	--	--	--
Hardwood													
Select white oaks	45,238	--	5,487	8,218	8,745	7,696	3,822	10,657	613	--	--	--	--
Select red oaks	22,828	--	1,663	3,175	3,502	4,075	2,494	2,731	5,188	--	--	--	--
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	39,248	--	3,469	2,902	3,914	4,909	6,017	14,510	3,527	--	--	--	--
Other red oaks	356,593	--	52,614	51,564	49,166	52,221	41,496	75,735	33,797	--	--	--	--
Hickory	51,433	--	9,049	7,537	8,406	7,787	2,386	11,977	4,291	--	--	--	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--	--	--
Soft maple	87,588	--	17,391	17,160	18,715	15,547	7,762	11,013	--	--	--	--	--
Beech	401	--	--	401	--	--	--	--	--	--	--	--	--
Sweetgum	257,754	--	56,235	56,027	56,740	31,629	23,869	29,772	3,482	--	--	--	--
Tupelo and blackgum	323,158	--	73,707	73,446	61,172	46,642	30,021	29,054	9,116	--	--	--	--
Ash	48,948	--	12,336	10,683	8,205	6,675	2,646	8,403	--	--	--	--	--
Cottonwood	2,234	--	728	--	--	--	731	775	--	--	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	63,472	--	7,162	10,946	9,901	9,505	11,737	14,221	--	--	--	--	--
Bay and magnolia	3,445	--	651	888	887	476	--	563	--	--	--	--	--
Black cherry	--	--	--	--	--	--	--	--	--	--	--	--	--
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	--
Sycamore	8,049	--	--	491	1,169	1,318	2,326	2,745	--	--	--	--	--
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	24,245	--	2,675	4,911	4,475	3,744	6,324	2,116	--	--	--	--	--
Other eastern hardwoods	17,593	--	2,916	3,733	4,073	2,183	1,638	3,050	--	--	--	--	--
Total hardwoods	1,352,227	--	246,083	252,062	239,070	194,407	143,269	217,322	60,014	--	--	--	--
All species	3,009,594	293,719	580,363	589,885	497,188	350,171	260,424	361,478	76,366	--	--	--	--

Table 39.--Total volume of live trees on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)												21.0- 28.9	29.0 and larger
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9				
Thousand cubic feet															
Softwood															
Longleaf pine	355,203	4,775	17,899	25,906	35,191	52,247	69,792	73,060	48,615	17,124	6,312	4,282	--		
Slash pine	410,124	4,322	19,690	52,492	78,026	79,758	67,990	48,866	31,694	13,425	9,300	4,561	--		
Shortleaf pine	65,819	135	2,402	6,208	5,119	11,232	12,046	8,612	12,919	4,453	861	1,832	--		
Loblolly pine	1,598,433	30,367	75,309	159,922	204,722	237,619	223,871	207,899	164,667	105,892	83,957	99,266	4,942		
Pond pine	143,592	619	4,813	9,932	14,200	20,638	24,007	26,614	12,737	9,959	9,425	9,523	1,125		
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--		
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--		
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--		
Spruce pine	25,011	340	315	389	1,466	2,596	667	2,838	3,251	5,132	1,416	5,886	715		
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--		
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--		
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--		
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--		
Baldcypress	195,255	1,195	3,538	5,072	9,077	18,332	17,074	24,746	23,955	20,292	21,462	39,390	11,122		
Pondcypress	103,229	2,052	2,861	8,949	15,296	17,121	13,503	17,726	7,185	7,632	4,609	2,796	3,499		
Cedars	1,376	153	--	343	379	501	--	--	--	--	--	--	--		
Total softwoods	2,898,042	43,958	126,827	269,213	363,476	440,044	428,950	410,361	305,023	183,909	137,342	167,536	21,403		
Hardwood															
Select white oaks	102,202	2,721	4,183	7,383	12,713	7,044	10,850	12,929	12,374	11,243	5,050	14,933	779		
Select red oaks	46,294	545	3,355	3,450	1,947	5,006	2,889	4,944	4,967	5,487	3,296	3,451	6,957		
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--	--	--		
Other white oaks	137,254	3,280	8,194	7,202	6,998	13,588	9,992	9,367	9,114	12,785	12,260	32,219	12,255		
Other red oaks	973,493	42,894	62,671	92,693	111,569	109,208	97,527	83,582	75,998	78,719	59,306	109,385	49,941		
Hickory	127,143	5,551	6,918	12,110	13,381	11,341	16,628	11,549	12,539	10,384	3,621	15,755	7,366		
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--		
Hard maple	853	80	--	--	--	--	773	--	--	--	--	--	--		
Soft maple	369,334	29,667	45,671	45,806	42,403	37,850	39,127	32,117	31,518	26,503	16,065	21,397	1,210		
Beech	2,401	281	--	--	647	--	628	598	--	--	--	247	--		
Sweetgum	689,277	33,269	51,878	73,854	86,068	81,335	95,527	80,323	73,706	42,986	29,193	36,707	4,431		
Tupelo and blackgum	893,202	28,001	38,972	71,489	77,087	108,702	151,330	129,390	97,547	72,405	48,702	52,927	16,650		
Ash	137,947	11,051	12,858	9,555	8,599	20,453	22,143	16,790	10,951	8,563	3,951	11,669	1,364		
Cottonwood	8,603	92	664	494	1,560	2,631	1,328	--	--	--	906	928	--		
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--		
Yellow-poplar	128,784	2,034	6,259	9,181	9,410	15,745	13,094	14,828	13,187	11,542	15,113	17,952	439		
Bay and magnolia	22,129	5,590	1,253	2,762	1,468	1,686	1,660	1,712	1,170	1,149	615	1,945	1,119		
Black cherry	30,023	7,359	7,649	8,250	6,115	457	--	193	--	--	--	--	--		
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	--		
Sycamore	12,857	64	--	1,045	599	--	--	739	1,617	1,740	3,672	3,381	--		
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--		
Elm	74,274	2,868	5,801	5,621	6,614	11,799	4,845	8,139	6,866	6,833	9,813	4,462	613		
Other eastern hardwoods	255,655	55,092	61,989	44,381	29,025	20,097	15,344	7,805	7,977	4,508	3,311	4,916	1,210		
Total hardwoods	4,011,725	230,439	318,315	395,276	416,203	446,942	483,685	415,005	359,531	294,847	214,874	332,274	104,334		
All species	6,909,767	274,397	445,142	664,489	779,679	886,986	912,635	825,366	664,554	478,756	352,216	499,810	125,737		

Table 40.--Green weight of forest biomass on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1987

Species	All classes	Diameter class (inches at breast height)												21.0- 28.9	29.0 and larger	
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9					
Hundred thousand pounds																
Softwood																
Longleaf pine	279,674	3,845	15,240	18,279	26,841	40,676	55,306	58,335	38,927	13,748	5,056	3,421	--	--	--	--
Slash pine	314,899	3,503	18,141	37,499	59,304	61,168	52,345	37,729	24,315	10,237	7,123	3,535	--	--	--	--
Shortleaf pine	45,878	76	1,473	3,780	3,467	7,893	8,511	6,189	9,303	3,241	619	1,326	--	--	--	--
Loblolly pine	1,146,659	14,664	44,468	113,685	150,516	173,749	163,878	152,273	119,699	77,084	61,071	71,965	3,607	3,607	--	--
Pond pine	101,110	340	2,691	6,767	9,998	14,637	17,112	19,002	9,227	7,043	6,722	6,765	806	806	--	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	17,547	244	280	216	937	1,767	466	2,018	2,304	3,648	1,001	4,150	516	516	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	149,887	595	2,225	2,543	5,606	12,532	12,409	18,750	18,852	16,179	17,512	32,997	9,687	9,687	--	--
Pondcypress	66,686	1,013	1,816	4,183	8,357	10,558	8,897	12,360	5,196	5,636	3,498	2,194	2,978	2,978	--	--
Cedars	1,073	95	--	287	306	385	--	--	--	--	--	--	--	--	--	--
Total softwoods	2,123,413	24,375	86,334	187,239	265,332	323,365	318,924	306,656	227,823	136,816	102,602	126,353	17,594	17,594	--	--
Hardwood																
Select white oaks	83,673	2,214	3,148	5,161	9,751	5,783	8,837	10,817	10,430	9,584	4,285	12,963	700	700	--	--
Select red oaks	39,174	452	2,582	2,292	1,463	4,025	2,412	4,207	4,293	4,837	2,899	3,187	6,525	6,525	--	--
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	120,772	2,374	5,968	4,779	5,761	11,285	8,659	8,377	8,262	11,808	11,490	30,236	11,773	11,773	--	--
Other red oaks	768,866	36,863	46,926	65,931	88,670	86,496	78,598	67,537	61,501	63,809	46,949	87,061	38,525	38,525	--	--
Hickory	105,360	4,830	6,116	8,819	10,230	9,308	13,454	9,575	10,358	8,854	3,170	13,882	6,764	6,764	--	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	729	67	--	--	--	--	662	--	--	--	--	--	--	--	--	--
Soft maple	264,259	22,525	32,567	31,413	31,329	26,936	28,089	23,188	22,552	18,642	11,396	14,819	803	803	--	--
Beech	1,905	240	--	--	446	--	485	505	--	--	--	229	--	--	--	--
Sweetgum	491,521	21,984	34,370	46,857	60,027	57,739	69,577	58,904	55,123	32,663	22,317	28,447	3,513	3,513	--	--
Tupelo and blackgum	609,904	19,056	26,662	34,633	46,446	69,974	102,010	90,751	71,512	54,154	36,954	42,860	14,892	14,892	--	--
Ash	82,369	6,742	8,090	6,949	5,878	12,361	13,142	9,577	6,157	4,785	2,107	5,926	655	655	--	--
Cottonwood	5,746	54	471	250	1,011	1,737	900	--	--	--	647	676	--	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	90,841	1,503	4,185	5,614	6,332	10,825	9,217	10,658	9,482	8,365	11,085	13,236	339	339	--	--
Bay and magnolia	13,445	3,191	734	1,564	876	1,098	1,047	1,088	721	751	406	1,263	706	706	--	--
Black cherry	17,811	3,537	5,122	4,777	3,900	316	--	159	--	--	--	--	--	--	--	--
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sycamore	9,295	42	--	525	370	--	--	518	1,150	1,284	2,793	2,613	--	--	--	--
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	47,834	2,068	4,017	3,382	4,138	7,149	3,070	5,225	4,392	4,608	6,399	2,938	448	448	--	--
Other eastern hardwoods	222,668	48,331	58,196	40,581	25,730	16,137	11,949	6,051	5,865	3,276	2,345	3,325	882	882	--	--
Total hardwoods	2,976,172	176,073	239,154	263,527	302,358	321,169	352,108	307,137	271,798	227,420	165,242	263,661	86,525	86,525	--	--
All species	5,099,585	200,448	325,488	450,766	567,690	644,534	671,032	613,793	499,621	364,236	267,844	390,014	104,119	104,119	--	--

Table 41.--Net annual growth and removals of live timber and growing stock on timberland, by species, Southern Coastal Plain of South Carolina, 1986

Species	Live timber ^a		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
- - - - - Thousand cubic feet - - - - -				
Softwood				
Yellow pines	122,614	127,842	120,662	122,994
Eastern white pine	--	--	--	--
Spruce and fir	--	--	--	--
Cypress	4,347	2,654	4,267	2,590
Other eastern softwoods	17	--	17	--
Total softwoods	126,978	130,496	124,946	125,584
Hardwood				
Select white and red oaks	3,224	4,762	3,202	4,477
Other white and red oaks	23,137	12,845	22,575	11,481
Hickory	1,489	1,554	1,453	1,554
Yellow birch	--	--	--	--
Hard maple	1	--	--	--
Sweetgum	13,382	14,267	13,194	13,170
Ash, walnut, and black cherry	2,282	2,236	2,100	2,056
Yellow-poplar	4,123	2,514	4,083	2,255
Tupelo and blackgum	5,976	4,805	5,712	4,223
Bay and magnolia	256	--	233	--
Other eastern hardwoods	10,598	6,258	9,590	3,223
Total hardwoods	64,468	49,241	62,142	42,439
All species	191,446	179,737	187,088	168,023

^a Merchantable portion only.

Table 42.--Net annual growth and removals of
sawtimber on timberland, by species, Southern
Coastal Plain of South Carolina, 1986

Species	Net annual growth	Annual timber removals
<u>Thousand board feet</u>		
Softwood		
Yellow pines	553,508	468,239
Eastern white pine	--	--
Spruce and fir	--	--
Cypress	23,367	11,258
Other eastern softwoods	202	--
Total softwoods	<u>577,077</u>	<u>479,497</u>
Hardwood		
Select white and red oaks	13,543	14,894
Other white and red oaks	87,459	34,952
Hickory	5,491	6,039
Yellow birch	--	--
Hard maple	--	--
Sweetgum	46,727	38,790
Ash, walnut, and black cherry	5,561	8,178
Yellow-poplar	21,305	11,314
Tupelo and blackgum	23,726	12,639
Bay and magnolia	461	--
Other eastern hardwoods	32,476	7,155
Total hardwoods	<u>236,749</u>	<u>133,961</u>
All species	<u>813,826</u>	<u>613,458</u>

Table 43.--Annual removals of growing stock on timberland, by species and diameter class, Southern Coastal Plain of South Carolina, 1986

Species	All classes	Diameter class (inches at breast height)											29.0 and larger
		5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9			
----- Thousand cubic feet -----													
Softwood													
Yellow pines	122,994	8,878	19,125	24,160	21,390	18,315	11,421	11,163	4,133	4,100	309		
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--		
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--		
Cypress	2,590	89	221	--	269	548	169	307	296	691	--		
Other eastern softwoods	--	--	--	--	--	--	--	--	--	--	--		
Total softwoods	125,584	8,967	19,346	24,160	21,659	18,863	11,590	11,470	4,429	4,791	309		
Hardwood													
Select white and red oaks	4,477	134	487	592	394	227	1,228	844	275	296	--		
Other white and red oaks	11,481	1,679	1,467	975	1,482	1,350	1,719	679	457	909	764		
Hickory	1,554	210	--	96	127	230	256	--	298	156	181		
Yellow birch	--	--	--	--	--	--	--	--	--	--	--		
Hard maple	--	--	--	--	--	--	--	--	--	--	--		
Sweetgum	13,170	1,353	1,355	2,185	1,512	2,381	1,046	1,038	725	1,575	--		
Ash, walnut, and black cherry	2,056	271	--	--	143	279	432	296	141	494	--		
Yellow-poplar	2,255	106	--	100	--	145	341	743	181	324	315		
Tupelo and blackgum	4,223	246	453	439	480	1,662	357	113	270	203	--		
Bay and magnolia	--	--	--	--	--	--	--	--	--	--	--		
Other eastern hardwoods	3,223	350	645	558	426	--	155	448	460	181	--		
Total hardwoods	42,439	4,349	4,407	4,945	4,564	6,274	5,534	4,161	2,807	4,138	1,260		
All species	168,023	13,316	23,753	29,105	26,223	25,137	17,124	15,631	7,236	8,929	1,569		

Table 44.--Mortality of live timber, growing stock, and sawtimber on timberland, by species, Southern Coastal Plain of South Carolina, 1986

Species	Live timber ^a	Growing stock	Sawtimber
	<u>Thousand</u> -- <u>cubic feet</u> --		<u>Thousand</u> <u>board feet</u>
Softwood			
Yellow pines	20,003	18,910	55,272
Eastern white pine	--	--	--
Spruce and fir	--	--	--
Cypress	974	929	2,638
Other eastern softwoods	73	73	--
Total softwoods	21,050	19,912	57,910
Hardwood			
Select white and red oaks	690	541	1,720
Other white and red oaks	10,854	7,531	19,370
Hickory	775	738	2,863
Yellow birch	--	--	--
Hard maple	--	--	--
Sweetgum	2,956	2,367	7,839
Ash, walnut, and black cherry	1,234	738	2,465
Yellow-poplar	116	116	--
Tupelo and blackgum	3,889	2,131	5,274
Bay and magnolia	168	--	--
Other eastern hardwoods	7,220	2,994	6,889
Total hardwoods	27,902	17,156	46,420
All species	48,952	37,068	104,330

^a Merchantable portion only.

Table 45.--Change in number of live trees on timberland, by species group, survey completion date, and diameter class, Southern Coastal Plain of South Carolina

Species group and year	All classes	Diameter class (inches at breast height)									
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0 and larger		

Table 46.--Land area, by land use class, major forest type, and survey completion date, Southern Coastal Plain of South Carolina

Land use class	Survey completion date			Change 1978-1987
	1968	1978	1987	
	- - - - - Acres - - - - -			
Forest land				
Timberland:				
Pine and oak-pine types	1,692,540	1,759,416	1,764,504	+5,088
Hardwood types	1,571,727	1,463,968	1,398,186	-65,782
Total	3,264,267	3,223,384	3,162,690	-60,694
Reserved timberland	4,900	17,001	11,688	-5,313
Woodland	2,219	--	--	--
Total forest land	3,271,386	3,240,385	3,174,378	-66,007
Nonforest land				
Cropland	1,129,294	1,156,172	1,088,507	-67,665
Pasture and range	190,904	128,170	125,389	-2,781
Other	521,250	571,222	704,615	+133,393
Total	1,841,448	1,855,564	1,918,511	+62,947
All land^a	5,112,834	5,095,949	5,092,889	-3,060

^aExcludes all water areas.

Table 47.--Volume^a of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class, Southern Coastal Plain of South Carolina

Species group and year	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0 and larger	
SAWTIMBER (in thousand board feet)											
Softwood											
1968	5,631,765	--	--	926,314	1,210,858	1,129,915	856,222	608,394	378,283	521,779	
1978	8,202,175	--	--	1,514,206	1,727,836	1,606,470	1,223,787	847,492	556,447	725,937	
1987	9,104,826	--	--	1,360,901	1,681,821	1,835,219	1,488,850	938,655	735,113	1,064,267	
Hardwood											
1968	5,459,184	--	--	--	880,085	1,033,319	953,883	778,767	546,922	1,266,208	
1978	6,666,085	--	--	--	1,069,562	1,206,147	1,195,395	943,222	676,391	1,575,368	
1987	7,293,838	--	--	--	1,193,034	1,256,590	1,251,043	1,061,360	816,500	1,715,311	
GROWING STOCK (in thousand cubic feet)											
Softwood											
1968	1,606,482	210,781	241,803	255,183	269,799	223,923	156,131	104,986	62,640	81,236	
1978	2,292,044	225,161	371,875	417,139	384,953	318,368	223,145	146,247	92,138	113,018	
1987	2,286,636	183,443	292,720	372,287	371,262	357,713	267,254	159,358	119,215	163,384	
Hardwood											
1968	1,840,426	155,782	216,040	269,422	259,612	254,826	208,135	156,725	103,623	216,261	
1978	2,206,605	185,975	253,914	305,918	315,500	297,443	260,845	189,808	128,158	269,044	
1987	2,367,685	200,404	264,715	310,420	345,898	308,373	273,874	215,464	155,417	293,120	
LIVE TIMBER ^b (in thousand cubic feet)											
Softwood											
1968	1,652,277	225,765	254,301	261,834	274,305	226,272	158,807	105,557	63,058	82,378	
1978	2,355,147	241,359	391,177	428,150	391,338	321,677	227,013	147,075	92,730	114,628	
1987	2,310,795	188,538	297,110	375,923	373,407	359,407	268,768	161,826	120,836	164,980	
Hardwood											
1968	2,292,263	245,183	291,913	337,567	320,876	294,999	231,981	181,487	119,565	268,692	
1978	2,745,246	291,959	343,280	383,176	389,902	344,343	290,684	219,784	147,840	334,278	
1987	2,764,748	264,079	322,739	361,031	396,757	343,330	298,366	243,563	178,163	356,720	

^aTo provide a basis for valid comparisons, adjustments have been made to allow for differences in volume tables and sawtimber specifications used in previous surveys.

^bMerchantable volume.

